



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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Mr. Bill Miller
NTN Driveshaft, Inc.
8251 South International Drive
Columbus, Indiana 47201

February 5, 2004

Re: 005-18032-00066
First Significant Permit Revision to
MSOP 005-14304-00066

Dear Mr. Miller:

NTN Driveshaft, Inc., was issued a minor source operating permit on September 16, 2003 for a constant velocity joints (CVJ) driveshaft parts and related components manufacturing plant. A letter requesting a revision to this permit was received on September 30, 2003. Pursuant to the provisions of 326 IAC 2-6.1-6, a significant permit revision to this permit is hereby approved as described in the attached Technical Support Document.

The modification consists of the construction and operation of the following units:

- (a) Three (3) CVJ forging presses #3, #4 and #5 (identified as EU28, 29, and 30), each with a maximum rated capacity of 12,00 steel billets per hour and 3.84 gallons of graphite lubricant per hour, using a venturi scrubber with an oil mist elimination chamber as control, and exhausting at stacks F5, F6 and F7.
- (b) Nine (9) heat treat induction hardening lines, HT26 through HT34 (identified as EU32, 33, 34, 35, 36, 37, 38, 39, and 40), each with a maximum rated capacity of 257 steel CVJ units per hour, and 0.09 gallons of quenchant per hour, using an oil mist collector as control and exhausting at stacks HT26IH through HT34IH.
- (c) Two (2) prop shaft heat treat induction hardening lines, HT35 and HT36 (identified as EU41 and 42), each with a maximum rated capacity of 257 steel CVJ units per hour, and 0.09 gallons of quenchant per hour, using an oil mist collector as control and exhausting at stacks HT35IH and HT36IH.
- (d) One (1) Bonderizing line #2 (identified as EU31), with a maximum rated capacity of 11,340 pounds of steel CVJ units per hour, 4.00 pounds per hour of Formcoat 1B, 8.94 pounds per hour of Formcoat 1A, 4.94 pounds per hour of Freiclean 10M, and 2.48 pounds of sulfuric acid per hour, using an acid scrubber as control and exhausting at stack Bonderizing #2.
- (e) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6:
 - (1) Three (3) cold parts washer DG#12 through 14 (identified as EU43, 44, and 45), each with a maximum rated capacity of nine (9) gallons.
 - (2) Five (5) cold parts washer DG#15 through 19 (identified as EU46, 47, 48, 49, and 50), each with a maximum rated capacity of twenty-six (26) gallons.



- (f) Three (3) shot blasting units (identified as EU51, 52, and 53), each with a maximum rated capacity of 14 steel CVJ units per hour and 720 pounds of steel shot per hour, using fabric filters that are integral to control, and exhausting at stacks CVJSB3 through CVJSB5.
- (g) Five (5) rust preventative coating lines RP#1 through 5 (identified as EU54, 55, 56, 57, and 58), each with a maximum rated capacity of 180 steel CVJ units per hour.
- (h) One natural gas-fired boiler (identified as boiler B13), with a maximum heat input capacity of 4.20 MMBtu per hour, and exhausting at stack B13.
- (i) Natural gas-fired combustion units consisting of unit space heaters, roof top air handlers, and air make-up units, with a combined heat input capacity of 101 MMBtu per hour.

The following construction conditions are applicable to the proposed project:

1. The data and information supplied with the application shall be considered part of this permit revision approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).
2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
3. Pursuant to IC 13-15-5-3, this approval to construct becomes effective upon its issuance.
4. Pursuant to 326 IAC 2-1.1-9 (Revocation), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

Pursuant to 326 IAC 2-6.1-6, the minor source operating permit shall be revised by incorporating the significant permit revision into the permit. All other conditions of the permit shall remain unchanged and in effect. Please find attached a copy of the revised permit which includes this letter, the attached operating conditions applicable to these emission units, and revised permit pages to the front of the original permit.

Pursuant to Contract No. A305-0-00-36, IDEM, OAQ has assigned the processing of this application to Eastern Research Group, Inc., (ERG). Therefore, questions should be directed to Sanobar Durrani, ERG, 1600 Perimeter Park Drive, Morrisville, North Carolina 27560, or call (919) 468-7810 to speak directly to Ms. Durrani. Questions may also be directed to Duane Van Laningham at IDEM, OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call (800) 451-6027, and ask for Duane Van Laningham, or extension 3-6878, or dial (317) 233-6878.

Sincerely,

Original signed by

Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

Attachments

ERG/SD

cc: File - Bartholomew County
Bartholomew County Health Department
Air Compliance Section Inspector - D.J. Knotts
Compliance Data Section
Administrative and Development - Sara Cloe
Technical Support and Modeling - Michele Boner



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MINOR SOURCE OPERATING PERMIT OFFICE OF AIR QUALITY

**NTN Driveshaft, Inc.
8251 S. International Dr.
Columbus, Indiana 47201**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this permit.

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

Operation Permit No.: MSOP 005-14340-00066	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: September 16, 2003 Expiration Date:
First Significant Permit Revision No.: 005-18032-00066	Pages Effected: 7-11, 14-16, 17, 19-24, 25-30, 33-35
Issued by: Original signed by Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: February 5, 2004

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SECTION A

SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in Conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-5.1-3(c)] [326 IAC 2-6.1-4(a)]

The Permittee owns and operates a stationary source manufacturing constant velocity joints (CVJ) driveshaft parts and related components.

Authorized individual:	Vice President
Source Address:	8251 S. International Dr., Columbus, Indiana 47201
Mailing Address:	8251 S. International Dr., Columbus, Indiana 47201
General Source Phone Number:	(812) 342-7000
SIC Code:	3714
County Location:	Bartholomew
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Minor Source Operating Permit (MSOP) Minor Source, under PSD; Major Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

A.2 Emissions Units and Pollution Control Equipment Summary

This stationary source is approved to operate the following emissions units and pollution control devices:

- (a) One (1) CVJ Forging Press #1, identified as EU1, constructed in 1996, with a rated capacity of 810 steel billets per hour and 2.27 gallons of graphite lubricant per hour, using an oil mist eliminator with steel mesh filters and water rinsing to control particulate emissions, and exhausting to stack F3;
- (b) One (1) CVJ Forging Press #2, identified as EU2, constructed in 1996, with a rated capacity of 810 steel billets per hour and 2.27 gallons of graphite lubricant per hour, using a venturi scrubber with an oil mist elimination chamber to control particulate emissions, and exhausting to stack F4;
- (c) One (1) Hub Forging Press #1, identified as EU4 (F1), constructed in 1996, with a rated capacity of 1,200 steel billets per hour and 3.84 gallons of graphite lubricant per hour, using an oil mist eliminator to control particulate emissions, and exhausting to stack F1;
- (d) One (1) shaft line, identified as EU16, constructed in 1996, with a rated capacity of 514 steel CVJ units per hour and 0.87 gallons of paint per hour, using dry filters to control particulate emissions, and exhausting to stack S4;
- (e) One (1) shaft line convection oven, identified as shaft line convection oven, constructed in 1996, with a rated capacity of 480 steel CVJ units per hour, and exhausting to stack S5;
- (f) One (1) Parkerizing line, identified as EU23, constructed in 1996, with a rated capacity of 514 steel CVJ units per hour, 1.77 pounds per hour of Additive 1, 13.83 pounds per hour of

Parco Cleaner 2053, and 57.74 pounds of Parco Lubrite per hour, and exhausting to stack S2;

- (g) Emission units with PM and PM10 emissions less than five (5) tons per year, SO₂, NO_x, and VOC emissions less than ten (10) tons per year, CO emissions less than twenty-five (25) tons per year, and lead emissions less than two-tenths (0.2) tons per year:
- (1) One (1) Hub shot blaster, identified as EU4 (F2), constructed in 1996, with a rated capacity of 1,200 steel CVJ units per hour and 60,847 pounds of steel shot per hour, with an integral fabric filter, and exhausting to stack F2;
 - (2) One (1) My shot blaster 1, identified as EU24, constructed in 1996, with a rated capacity of 120 steel CVJ units per hour and 462 pounds of sand shot per hour, with an integral fabric filter, and exhausting to stack My 1;
 - (3) One (1) My shot blaster 2, identified as EU25, constructed in 1996, with a rated capacity of 120 steel CVJ units per hour and 377 pounds of sand shot per hour, with an integral fabric filter, and exhausting to stack My 2;
 - (4) One (1) heat treat line BJ1, identified as EU5, constructed in 1996, consisting of induction hardening, a spray paint booth, and a convection oven, all with a rated capacity of 280 steel CVJ units per hour, 0.15 gallons of paint per hour, and 0.10 gallons of quenchant per hour, using an oil mist collector to control particulate emissions from induction hardening and dry filters to control particulate emissions from the spray paint booth, and exhausting to stacks BJ1IH, BJ1SPB, and BJ1CO;
 - (5) One (1) heat treat line BJ2, identified as EU6, constructed in 1996, consisting of induction hardening, a spray paint booth, and a convection oven, all with a rated capacity of 300 steel CVJ units per hour, 0.16 gallons of paint per hour, and 0.11 gallons of quenchant per hour, using an oil mist collector to control particulate emissions from induction hardening and a water curtain to control particulate emissions from the spray paint booth, and exhausting to stacks BJ2IH, BJ2SPB, and BJ2CO;
 - (6) One (1) heat treat line TJ2, identified as EU7, constructed in 1996, consisting of induction hardening, a spray paint booth, and a convection oven, all with a rated capacity of 150 steel CVJ units per hour, 0.08 gallons of paint per hour, and 0.05 gallons of quenchant per hour, using an oil mist collector to control particulate emissions from induction hardening and dry filters to control particulate emissions from the spray paint booth, and exhausting to stacks TJ2IH, TJ2SPB, and TJ2CO;
 - (7) One (1) heat treat line TJ3, identified as EU8, constructed in 1996, consisting of induction hardening, a spray paint booth, and a convection oven, with a rated capacity of 150 steel CVJ units per hour, 0.08 gallons of paint per hour, and 0.05 gallons of quenchant per hour, using an oil mist collector to control particulate emissions from induction hardening and dry filters to control particulate emissions from the spray paint booth, and exhausting to stacks TJ3IH, TJ3SPB, and TJ3CO;
 - (8) One (1) heat treat line TJ4, identified as EU9, constructed in 1997, consisting of induction hardening, a spray paint booth, and a convection oven, with a rated capacity of 270 steel CVJ units per hour, 0.14 gallons of paint per hour, and 0.10 gallons of quenchant per hour, using an oil mist collector to control particulate emissions from induction hardening and a water curtain to control particulate emissions from the spray paint booth, and exhausting to stacks TJ4IH, TJ4SPB, and TJ4CO;

- (9) One (1) heat treat line TJ6, identified as EU10, constructed in 2002, consisting of induction hardening, a spray paint booth, and a convection oven, with a rated capacity of 257 steel CVJ units per hour, 0.14 gallons of paint per hour, and 0.09 gallons of quenchant per hour, using an oil mist collector to control particulate emissions from induction hardening and a water curtain to control particulate emissions from the spray paint booth, and exhausting to stacks TJ6IH, TJ6SPB, and TJ6CO;
- (10) One (1) heat treat line HT21, identified as EU11, constructed in 1997, consisting of induction hardening, a spray paint booth, and a convection oven, with a rated capacity of 225 steel CVJ units per hour, 0.12 gallons of paint per hour, and 0.08 gallons of quenchant per hour, using an oil mist collector to control particulate emissions from induction hardening and a water curtain to control particulate emissions from the spray paint booth, and exhausting to stacks HT21IH, HT21SPB, and HT21CO;
- (11) One (1) heat treat line HT22, identified as EU12, constructed in 1997, consisting of induction hardening, a spray paint booth, and a convection oven, with a rated capacity of 225 steel CVJ units per hour, 0.12 gallons of paint per hour, and 0.08 gallons of quenchant per hour, using an oil mist collector to control particulate emissions from induction hardening and dry filters to control particulate emissions from the spray paint booth, and exhausting to stacks HT22IH, HT22SPB, and HT22CO;
- (12) One (1) heat treat line HT23, identified as EU13, constructed in 1997, consisting of induction hardening, a spray paint booth, and a convection oven, with a rated capacity of 180 steel CVJ units per hour, 0.10 gallons of paint per hour, and 0.06 gallons of quenchant per hour, using an oil mist collector to control particulate emissions from induction hardening and a water curtain to control particulate emissions from the spray paint booth, and exhausting to stacks HT23IH, HT23SPB, and HT23CO;
- (13) One (1) heat treat line HT24, identified as EU14, constructed in 1997, consisting of induction hardening, a spray paint booth, and a convection oven, with a rated capacity of 225 steel CVJ units per hour, 0.12 gallons of paint per hour, and 0.08 gallons of quenchant per hour, using an oil mist collector to control particulate emissions from induction hardening and a water curtain to control particulate emissions from the spray paint booth, and exhausting to stacks HT24IH, HT24SPB, and HT24CO;
- (14) One (1) heat treat line HT25, identified as EU15, constructed in 2002, consisting of induction hardening, a spray paint booth, and a convection oven, with a rated capacity of 257 steel CVJ units per hour, 0.14 gallons of paint per hour, and 0.09 gallons of quenchant per hour, using an oil mist collector to control particulate emissions from induction hardening and a water curtain to control particulate emissions from the spray paint booth, and exhausting to stacks HT25IH, HT25SPB, and HT25CO;
- (15) One (1) Bonderizing line, identified as EU22, constructed in 1996, with a rated capacity of 11,340 pounds of steel CVJ units per hour, 4.06 pounds per hour of Formcoat 1B, 8.88 pounds per hour of Formcoat 1A, 4.92 pounds per hour of Freiclean 10M, and 2.48 pounds of sulfuric acid per hour, using an acid scrubber to control particulate emissions, and exhausting to stack Bonderizing; and

- (16) One (1) quality assurance process, identified as QA process, with a rated capacity of 2.30 pounds of sulfuric acid per hour;
 - (17) Two (2) shot blasters, identified as CVJ #1 and CVJ #2, constructed in 2003, with a maximum throughput rate of 14 steel CVJ units per hour and a maximum of 720 pounds of steel shot per hour, controlled by an integral fabric filter, and exhausting to stacks CVJSB1 and CVJSB2, respectively.
 - (18) Three (3) shot blasting units (identified as EU51, 52, and 53), each with a maximum rated capacity of 14 steel CVJ units per hour and 720 pounds of steel shot per hour, using three (3) baghouses that are integral to control, and exhausting at stacks CVJSB3 through CVJSB5.
 - (19) Nine (9) heat treat induction hardening lines HT26 through HT34 (identified as EU32, 33, 34, 35, 36, 37, 38, 39, and 40), each with a maximum rated capacity of 257 steel CVJ units per hour, and 0.09 gallons of quenchant per hour, using an oil mist collector as control and exhausting at stack HT26IH through HT34IH.
 - (20) Two (2) prop shaft heat treat induction hardening lines HT35 and HT36 (identified as EU41 and 42), each with a maximum rated capacity of 257 steel CVJ units per hour, and 0.09 gallons of quenchant per hour, using an oil mist collector as control and exhausting at stacks HT35IH and HT36IH.
 - (21) One (1) Bonderizing line #2 (identified as EU31), with a maximum rated capacity of 11,340 pounds of steel CVJ units per hour, 4.00 pounds per hour of Formcoat 1B, 8.94 pounds per hour of Formcoat 1A, 4.94 pounds per hour of Freiclean 10M, and 2.48 pounds of sulfuric acid per hour, using an acid scrubber as control and exhausting at stack Bonderizing #2.
- (h) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6:
- (1) One (1) degreaser, identified as Degreaser 1 - Heat Treat South (EU17), constructed in 1996, with a rated capacity of 9 gallons;
 - (2) One (1) degreaser, identified as Degreaser 2 - Heat Treat North (EU18), constructed in 1996, with a rated capacity of 9 gallons;
 - (3) One (1) degreaser, identified as Degreaser 3 - Maintenance (EU19), constructed in 1996, with a rated capacity of 26 gallons;
 - (4) One (1) degreaser, identified as Degreaser 4 - Turnings North (EU20), constructed in 1996, with a rated capacity of 26 gallons;
 - (5) One (1) degreaser, identified as Degreaser 5 - Assembly South (EU21), constructed in 1996, with a rated capacity of 26 gallons;
 - (6) One (1) degreaser, identified as Degreaser 6 - Turnings South (EU22), constructed in 1996, with a rated capacity of 26 gallons;
 - (7) One (1) degreaser, identified as Degreaser 7 - Shaft Line Maintenance (EU23), constructed in 1996, with a rated capacity of 34 gallons;
 - (8) One (1) degreaser, identified as Degreaser 8 - Spindle Room (EU24), constructed in 1996, with a rated capacity of 78 gallons;

- (9) One (1) degreaser, identified as Degreaser 9 - Forktruck Maintenance (EU25), constructed in 1996, with a rated capacity of 34 gallons;
 - (10) One (1) degreaser, identified as Degreaser 10 - Plant Maintenance (EU26), constructed in 1996, with a rated capacity of 34 gallons;
 - (11) One (1) degreaser, identified as Degreaser 11 - Die Shop (EU27), constructed in 1996, with a rated capacity of 17 gallons; and
 - (12) Three (3) cold parts washer DG#12 through 14 (identified as EU43, 44, and 45), each with a maximum rated capacity of nine (9) gallons.
 - (13) Five (5) cold parts washer DG#15 through 19 (identified as EU46, 47, 48, 49, and 50), each with a maximum rated capacity of twenty-six (26) gallons.
- (i) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour:
- (1) One (1) natural gas-fired boiler, identified as Bonderizing Boiler (B1), constructed in 1996, with a rated capacity of 4.2 million British thermal units per hour, and exhausting to stack B1;
 - (2) One (1) natural gas-fired boiler, identified as Parkerizing Boiler (B2), constructed in 1994, with a rated capacity of 2.1 million British thermal units per hour, and exhausting to stack B2;
 - (3) One (1) natural gas-fired boiler, identified as Administration Bldg (B3), constructed in 1994, with a rated capacity of 1.2 million British thermal units per hour, and exhausting to stack B3;
 - (4) One (1) natural gas-fired boiler, identified as Administration Bldg (B4), constructed in 1994, with a rated capacity of 1.2 million British thermal units per hour, and exhausting to stack B4;
 - (5) One (1) natural gas-fired boiler, identified as B5, constructed in 2000, with a rated capacity of 0.48 million British thermal units per hour, and exhausting to stack B5;
 - (6) One (1) natural gas-fired boiler, identified as B6, constructed in 1989, with a rated capacity of 0.6 million British thermal units per hour, and exhausting to stack B6;
 - (7) One (1) natural gas-fired boiler, identified as B7, constructed in 1989, with a rated capacity of 0.44 million British thermal units per hour, and exhausting to stack B7;
 - (8) One (1) natural gas-fired boiler, identified as B8, constructed in 1989, with a rated capacity of 0.18 million British thermal units per hour, and exhausting to stack B8;
 - (9) One (1) natural gas-fired boiler, identified as B9, constructed in 1989, with a rated capacity of 0.2 million British thermal units per hour, and exhausting to stack B9;
 - (10) One (1) natural gas-fired boiler, identified as B10, constructed in 1989, with a rated capacity of 0.2 million British thermal units per hour, and exhausting to stack B10;
 - (11) One (1) natural gas-fired boiler, identified as B11, constructed in 1989, with a rated capacity of 1.98 million British thermal units per hour, and exhausting to stack B11;

- (12) One (1) natural gas-fired boiler, identified as B12, constructed in 2002, with a rated capacity of 0.2 million British thermal units per hour, and exhausting to stack B12;
- (13) Seventy-two (72) natural gas-fired space heaters, identified as UH1-72, with a combined rated maximum capacity of 7.71 million British thermal units per hour;
- (14) Fifty-eight (58) natural gas-fired roof top air handlers, identified as RTAH1-58, with a combined rated maximum capacity of 24.63 million British thermal units per hour (note: each unit has a maximum capacity less than 10 million British thermal units per hour);
- (15) Thirteen (13) natural gas-fired air make-up units, identified as MAU1-13, with a combined rated maximum capacity of 23.15 million British thermal units per hour (note: each unit has a maximum capacity less than 10 million British thermal units per hour);
- (16) Three (3) natural gas-fired HVAC units, identified as A/C1-3, with a combined rated maximum capacity of 1.68 million British thermal units per hour; and
- (17) Twenty-two (22) natural gas-fired miscellaneous units, identified as WH, with a combined rated maximum capacity of 4.15 million British thermal units per hour.
- (18) One (1) natural gas-fired boiler (identified as boiler B13), with a maximum heat input capacity of 4.20 MMBtu per hour, and exhausting at stack B13.
- (19) Natural gas-fired combustion units consisting of unit space heaters, roof top air handlers, and air make-up units, with a combined heat input capacity of 101 MMBtu per hour.
- (j) Three (3) CVJ forging presses #3, #4 and #5 (identified as EU28, 29, and 30), each with a maximum rated capacity of 12,00 steel billets per hour and 3.84 gallons of graphite lubricant per hour, using a venturi scrubber with an oil mist elimination chamber as control, and exhausting at stacks F5, F6 and F7.
- (k) Five (5) rust preventative coating lines RP#1 through 5 (identified as EU54, 55, 56, 57, and 58), each with a maximum rated capacity of 180 steel CVJ units per hour.

A.3 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is a major source, as defined in 326 IAC 2-7-1(22);
- (b) It is an affected source under Title IV (Acid Deposition Control) of the Clean Air Act, as defined in 326 IAC 2-7-1(3);
- (c) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION B GENERAL CONDITIONS

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1.1 AND 40 CFR 52.780, WITH CONDITIONS LISTED BELOW.

B.1 Permit No Defense [IC 13]

This permit to construct and operate does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

B.2 Definitions

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations IC 13-11, 326 IAC 1-2, and 326 IAC 2-1.1-1 shall prevail.

B.3 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this permit becomes effective upon its issuance.

B.4 Revocation of Permits [326 IAC 2-1.1-9(5)]

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this permit if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

B.5 Permit Term and Renewal [326 IAC 2-6.1-7(a)][326 IAC 2-1.1-9.5]

This permit is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions of this permit do not affect the expiration date.

The Permittee shall apply for an operation permit renewal at least ninety (90) days prior to the expiration date. If a timely and sufficient permit application for a renewal has been made, this permit shall not expire and all terms and conditions shall continue in effect until the renewal permit has been issued or denied.

B.6 Modification to Permit [326 IAC 2]

All requirements and conditions of this operating permit shall remain in effect unless modified in a manner consistent with procedures established for modifications of construction permits pursuant to 326 IAC 2 (Permit Review Rules).

B.7 Minor Source Operating Permit [326 IAC 2-6.1]

This document shall also become a minor source operating permit pursuant to 326 IAC 2-6.1 when, prior to start of operation, the following requirements are met:

- (a) The attached Affidavit of Construction shall be submitted to the Office of Air Quality (OAQ), Permit Administration & Development Section.
 - (1) If the Affidavit of Construction verifies that the facilities covered in this Construction Permit were constructed as proposed in the application, then the facilities may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM.
 - (2) If actual construction of the emission units differs from the construction proposed in the application, the source may not begin operation until the permit has been revised pursuant to 326 IAC 2-6.1-6 and 326 IAC 2-2 and an Operation Permit Validation Letter is issued.

- (b) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.
- (c) Upon receipt of the Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section, the Permittee shall attach it to this document.
- (d) The operation permit will be subject to annual operating permit fees pursuant to 326 IAC 2-7-19 (Fees).
- (e) Pursuant to 326 IAC 2-7-4(a)(1)(A)(ii) and 326 IAC 2-5.1-4, the Permittee shall apply for a Title V operating permit or receive a Federally Enforceable State Operating Permit (FESOP) within twelve (12) months of the date on which the source first meets an applicability criterion of 326 IAC 2-7-2.

B.8 Annual Notification [326 IAC 2-6.1-5(a)(5)]

- (a) Annual notification shall be submitted to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.
- (b) The notification must be signed by an authorized individual.
- (c) The annual notice shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in the format attached no later than March 1 of each year to:

Compliance Branch, Office of Air Quality
Indiana Department of Environmental Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, IN 46206-6015
- (d) The notification shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

B.9 Preventive Maintenance Plan [326 IAC 1-6-3]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall maintain and implement Preventive Maintenance Plans (PMPs) including the following information on each facility:
 - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.
- (b) The Permittee shall implement the PMPs, including any required record keeping, as necessary to ensure that failure to implement a PMP does not cause or contribute to an exceedance of any limitation on emissions or potential to emit.

- (c) A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emission or potential to emit. The PMP does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

B.10 Permit Revision [326 IAC 2-5.1-3(e)(3)] [326 IAC 2-6.1-6]

- (a) Permit revisions are governed by the requirements of 326 IAC 2-6.1-6.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application shall be certified by an "authorized individual" as defined by 326 IAC 2-1.1-1.
- (c) The Permittee shall notify the OAQ within thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

B.11 Source Modification [326 IAC 2-7-10.5]

A modification, construction, or reconstruction is governed by 326 IAC 2 and 326 IAC 2-7-10.5.

B.12 Inspection and Entry [326 IAC 2-5.1-3(e)(4)(B)] [326 IAC 2-6.1-5(a)(4)][IC 13-14-2-2]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a permitted source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) Have access to and copy, at reasonable times, any records that must be kept under this title or the conditions of this permit or any operating permit revisions;
- (c) Inspect, at reasonable times, any processes, emissions units (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit or any operating permit revisions;
- (d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.13 Transfer of Ownership or Operation [326 IAC 2-6.1-6(d)(3)]

Pursuant to [326 IAC 2-6.1-6(d)(3)] :

- (a) In the event that ownership of this source is changed, the Permittee shall notify IDEM, OAQ, Permits Branch, within thirty (30) days of the change.
- (b) The written notification shall be sufficient to transfer the permit to the new owner by an notice-only change pursuant to 326 IAC 2-6.1-6(d)(3).
- (c) IDEM, OAQ, shall issue a revised permit.

The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

B.14 Annual Fee Payment [326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees to IDEM, OAQ within thirty (30) calendar days of receipt of a billing.
- (b) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, I/M & Billing Section), to determine the appropriate permit fee.

SECTION C

SOURCE OPERATION CONDITIONS

Entire Source

C.1 Particulate Limitations For Manufacturing Processes with Process Weight Rates Less Than One Hundred (100) pounds per hour [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any manufacturing process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour.

C.2 Permit Revocation [326 IAC 2-1.1-9]

Pursuant to 326 IAC 2-1.1-9 (Revocation of Permits), this permit to operate may be revoked for any of the following causes:

- (a) Violation of any conditions of this permit.
- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.
- (c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.
- (d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.
- (e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of this article.

C.3 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.4 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

C.5 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
 - (1) When the amount of affected RACM increases or decreases by at least twenty percent (20%); or
 - (2) If there is a change in the following:
 - (A) Asbestos removal or demolition start date;
 - (B) Removal or demolition contractor; or
 - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Asbestos Section, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by an "authorized individual" as defined by 326 IAC 2-7-1(34).

- (e) **Procedures for Asbestos Emission Control**
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) **Demolition and Renovation**
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).
- (g) **Indiana Accredited Asbestos Inspector**
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Accredited Asbestos inspector is not federally enforceable.

Testing Requirements

C.6 Performance Testing [326 IAC 3-6]

- (a) Compliance testing on new emissions units shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date.

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual date.
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by the IDEM, OAQ, if the source submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.7 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U.S. EPA.

Compliance Monitoring Requirements

C.8 Compliance Monitoring [326 IAC 2-1.1-11]

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. All monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

C.9 Monitoring Methods [326 IAC 3][40 CFR 60][40 CFR 63]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60, Appendix B, 40 CFR 63, or other approved methods as specified in this permit.

Record Keeping and Reporting Requirements

C.10 Malfunctions Report [326 IAC 1-6-2]

Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

- (a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) or appointed representative upon request.
- (b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAQ, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.
- (c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).
- (d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

C.11 Emission Statement [326 IAC 2-6]

- (a) The Permittee shall submit an annual emission statement certified pursuant to the requirements of 326 IAC 2-6, that must be received by July 1 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The annual emission statement shall meet the following requirements:
 - (1) Indicate estimated actual emissions of criteria pollutants from the source, in compliance with 326 IAC 2-6 (Emission Reporting);
 - (2) Indicate estimated actual emissions of regulated pollutants (as defined by 326 IAC 2-7-1(32) "Regulated pollutant which is used only for purposes of Section 19 of this rule") from the source, for purposes of Part 70 fee assessment.
- (b) The annual emission statement covers the twelve (12) consecutive month time period starting January 1 and ending December 31. The annual emission statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015
- (c) The annual emission statement required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

The submittal by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

C.12 General Record Keeping Requirements [326 IAC 2-6.1-5]

- (a) Records of all required data, reports and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented when operation begins.

C.13 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

- (a) Reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015
- (b) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (c) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. The reports do not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (d) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years.

SECTION D.1

FACILITY OPERATION CONDITIONS

Facility Description: Forging Presses, Shaft Line, and Parkerizing Line

- (a) One (1) CVJ Forging Press #1, identified as EU1, constructed in 1996, with a rated capacity of 810 steel billets per hour and 2.27 gallons of graphite lubricant per hour, using an oil mist eliminator with steel mesh filters and water rinsing to control particulate emissions, and exhausting to stack F3;
- (b) One (1) CVJ Forging Press #2, identified as EU2, constructed in 1996, with a rated capacity of 810 steel billets per hour and 2.27 gallons of graphite lubricant per hour, using a venturi scrubber with an oil mist elimination chamber to control particulate emissions, and exhausting to stack F4;
- (c) One (1) Hub Forging Press #1, identified as EU4 (F1), constructed in 1996, with a rated capacity of 1,200 steel billets per hour and 3.84 gallons of graphite lubricant per hour, using an oil mist eliminator to control particulate emissions, and exhausting to stack F1;
- (d) One (1) shaft line, identified as EU16, constructed in 1996, with a rated capacity of 514 steel CVJ units per hour and 0.87 gallons of paint per hour, using dry filters to control particulate emissions, and exhausting to stack S4;
- (e) One (1) shaft line convection oven, identified as shaft line convection oven, constructed in 1996, with a rated capacity of 480 steel CVJ units per hour, and exhausting to stack S5;
- (f) One (1) Parkerizing line, identified as EU23, constructed in 1996, with a rated capacity of 514 steel CVJ units per hour, 1.77 pounds per hour of Additive 1, 13.83 pounds per hour of Parco Cleaner 2053, and 57.74 pounds of Parco Lubrite per hour, and exhausting to stack S2;
- (j) Three (3) CVJ forging presses #3, #4 and #5 (identified as EU28, 29, and 30), each with a maximum rated capacity of 12,00 steel billets per hour and 3.84 gallons of graphite lubricant per hour, using a venturi scrubber with an oil mist elimination chamber as control, and exhausting at stacks F5, F6 and F7.
- (k) Five (5) rust preventative coating lines RP#1 through 5 (identified as EU54, 55, 56, 57, and 58), each with a maximum rated capacity of 180 steel CVJ units per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards (326 IAC 2-6.1-5(a)(1))

D.1.1 Particulate Emissions Limitations [326 IAC 6-3-2]

- (a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), particulate emissions from these facilities shall not exceed the listed pounds per hour emission limitations when operating at the process weight rates listed below:

Unit	Process Weight Rate (lb/hr)	Process Weight Rate (ton/hr)	Particulate Emission Limit (lb/hr)
CVJ Forging Press #1 (EU1)	6885	3.44	9.38
CVJ Forging Press #2 (EU2)	6885	3.44	9.38

Unit	Process Weight Rate (lb/hr)	Process Weight Rate (ton/hr)	Particulate Emission Limit (lb/hr)
Hub Forging Press #1 (EU4(F1))	6300	3.15	8.84
Parkerizing Line (EU23)	4,369	2.18	6.92
Each of the three (3) CVJ Forging Presses #3, #4, #5 (EU 28, 29, and 30)	10,200	5.10	12.2

These limits were calculated using the following equations:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

- (b) Particulate from the spray booth associated with the shaft line (EU16) shall be controlled by dry particulate filters and the Permittee shall operate the control device in accordance with manufacturer's specifications.

If overspray is visibly detected at the exhaust or accumulates on the ground, the Permittee shall inspect the control device and do either of the following no later than four (4) hours after such an observation:

- (1) Repair control device so that no overspray is visible detectable at the exhaust or accumulates on the ground.
- (2) Operate equipment so that no overspray is visible detectable at the exhaust or accumulates on the ground.

If overspray is visibly detected, the Permittee shall maintain a record of the action taken as a result of the inspection, any repairs of the control device, or change in operations, so that overspray is not visibly detected at the exhaust or accumulates on the ground. These records must be maintained for five (5) years.

D.1.2 Volatile Organic Compounds (VOC) Limitations [326 IAC 8-2-9]

Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the Permittee shall not allow the discharge into the atmosphere VOC from the shaft line (EU16) and five (5) rust preventative coating lines RP#1 through 5 (identified as EU54, 55, 56, 57, and 58) in excess of three and five-tenths (3.5) pounds of VOC per gallon of coating, excluding water, as delivered to the applicator, except to the extent allowed by the regulation.

D.1.3 Volatile Organic Compound (VOC) Limitations, Clean-up Requirements [326 IAC 8-2-9]

Pursuant to 326 IAC 8-2-9(f) (Miscellaneous Metal Coating Operations), all solvents sprayed from the shaft line (EU16) and five (5) rust preventative coating lines RP#1 through 5 (identified as EU54, 55, 56, 57, and 58) application equipment during cleanup or color changes shall be directed into containers. Said containers shall be closed as soon as the solvent spraying is complete. In addition, all waste solvent shall be disposed of in such a manner that minimizes evaporation.

D.1.4 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and any control devices.

Compliance Determination Requirements

D.1.5 Volatile Organic Compounds (VOC) [326 IAC 8-1-2] [326 IAC 8-1-4]

Compliance with the shaft line VOC content contained in Condition D.1.2 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the "as supplied" and "as applied" VOC data sheets. IDEM, OAQ reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures in 326 IAC 8-1-4.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.1.6 Failure Detection

In the event that a scrubber malfunction has been observed:
Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports shall be considered a violation of this permit.

Record Keeping and Reporting Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.1.7 Record Keeping Requirements

- (a) To document compliance with Condition D.1.2, the Permittee shall maintain records of the VOC content of each coating material and solvent used less water.
- (b) To document compliance with Condition D.1.4, the Permittee shall maintain records of any additional inspections prescribed by the Preventative Maintenance Plan.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.2

FACILITY OPERATION CONDITIONS

Facility Description: Shot Blasters

- (g) Emission units with PM and PM10 emissions less than five (5) tons per year, SO₂, NO_x, and VOC emissions less than ten (10) tons per year, CO emissions less than twenty-five (25) tons per year, and lead emissions less than two-tenths (0.2) tons per year:
- (1) One (1) Hub shot blaster, identified as EU4 (F2), constructed in 1996, with a rated capacity of 1,200 steel CVJ units per hour and 60,847 pounds of steel shot per hour, with an integral fabric filter, and exhausting to stack F2;
 - (2) One (1) My shot blaster 1, identified as EU24, constructed in 1996, with a rated capacity of 120 steel CVJ units per hour and 462 pounds of sand shot per hour, with an integral fabric filter, and exhausting to stack My 1;
 - (3) One (1) My shot blaster 2, identified as EU25, constructed in 1996, with a rated capacity of 120 steel CVJ units per hour and 377 pounds of sand shot per hour, with an integral fabric filter, and exhausting to stack My 2;
 - (17) Two (2) shot blasters, identified as CVJ #1 and CVJ #2, constructed in 2003, with a maximum throughput rate of 14 steel CVJ units per hour and a maximum of 720 pounds of steel shot per hour, controlled by an integral fabric filter, and exhausting to stacks CVJSB1 and CVJSB2, respectively.
 - (18) Three (3) shot blasting units (identified as EU51, 52, and 53), each with a maximum rated capacity of 14 steel CVJ units per hour and 720 pounds of steel shot per hour, using three (3) baghouses that are integral to control, and exhausting at stacks CVJSB3 through CVJSB5.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

D.2.1 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), particulate emissions from each of the three (3) shot blasting units (identified as EU51, 52, and 53) shall not each exceed 2.07 pounds per hour when operating at a process weight rate of 720 pounds per hour. The pounds per hour limitation was calculated using the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

D.2.2 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and their control device.

Compliance Determination Requirements

D.2.3 Particulate Control [326 IAC 6-3-2]

- (a) The integral fabric filters shall be in operation at all times that the Hub Shot Blaster (EU4(F2)), My Shot Blaster 1 (EU24), My Shot Blaster 2 (EU25), and shot blasters CVJ #1 and CVJ #2 are in operation in order to ensure exemption from the requirements of 326 IAC 6-3-2.
- (b) In order to comply with D.2.1, the three (3) integral baghouses for particulate control shall be in operation and control emissions from the three (3) shot blasting units (identified as EU51, 52, and 53) at all times that the three (3) shot blasting units (identified as EU51, 52, and 53) are in operation.

SECTION D.3

FACILITY OPERATION CONDITIONS

Facility Description: Heat Treat Lines, Bonderizing Line, and QA Process

- (g) Emission units with PM and PM10 emissions less than five (5) tons per year, SO₂, NO_x, and VOC emissions less than ten (10) tons per year, CO emissions less than twenty-five (25) tons per year, and lead emissions less than two-tenths (0.2) tons per year:
- (4) One (1) heat treat line BJ1, identified as EU5, constructed in 1996, consisting of induction hardening, a spray paint booth, and a convection oven, all with a rated capacity of 280 steel CVJ units per hour, 0.15 gallons of paint per hour, and 0.10 gallons of quenchant per hour, using an oil mist collector to control particulate emissions from induction hardening and dry filters to control particulate emissions from the spray paint booth, and exhausting to stacks BJ1IH, BJ1SPB, and BJ1CO;
 - (5) One (1) heat treat line BJ2, identified as EU6, constructed in 1996, consisting of induction hardening, a spray paint booth, and a convection oven, all with a rated capacity of 300 steel CVJ units per hour, 0.16 gallons of paint per hour, and 0.11 gallons of quenchant per hour, using an oil mist collector to control particulate emissions from induction hardening and a water curtain to control particulate emissions from the spray paint booth, and exhausting to stacks BJ2IH, BJ2SPB, and BJ2CO;
 - (6) One (1) heat treat line TJ2, identified as EU7, constructed in 1996, consisting of induction hardening, a spray paint booth, and a convection oven, all with a rated capacity of 150 steel CVJ units per hour, 0.08 gallons of paint per hour, and 0.05 gallons of quenchant per hour, using an oil mist collector to control particulate emissions from induction hardening and dry filters to control particulate emissions from the spray paint booth, and exhausting to stacks TJ2IH, TJ2SPB, and TJ2CO;
 - (7) One (1) heat treat line TJ3, identified as EU8, constructed in 1996, consisting of induction hardening, a spray paint booth, and a convection oven, with a rated capacity of 150 steel CVJ units per hour, 0.08 gallons of paint per hour, and 0.05 gallons of quenchant per hour, using an oil mist collector to control particulate emissions from induction hardening and dry filters to control particulate emissions from the spray paint booth, and exhausting to stacks TJ3IH, TJ3SPB, and TJ3CO;
 - (8) One (1) heat treat line TJ4, identified as EU9, constructed in 1997, consisting of induction hardening, a spray paint booth, and a convection oven, with a rated capacity of 270 steel CVJ units per hour, 0.14 gallons of paint per hour, and 0.10 gallons of quenchant per hour, using an oil mist collector to control particulate emissions from induction hardening and a water curtain to control particulate emissions from the spray paint booth, and exhausting to stacks TJ4IH, TJ4SPB, and TJ4CO;
 - (9) One (1) heat treat line TJ6, identified as EU10, constructed in 2002, consisting of induction hardening, a spray paint booth, and a convection oven, with a rated capacity of 257 steel CVJ units per hour, 0.14 gallons of paint per hour, and 0.09 gallons of quenchant per hour, using an oil mist collector to control particulate emissions from induction hardening and a water curtain to control particulate emissions from the spray paint booth, and exhausting to stacks TJ6IH, TJ6SPB, and TJ6CO;

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

SECTION D.3

FACILITY OPERATION CONDITIONS (Continued)

Facility Description: Heat Treat Lines, Bonderizing Line, and QA Process

- (10) One (1) heat treat line HT21, identified as EU11, constructed in 1997, consisting of induction hardening, a spray paint booth, and a convection oven, with a rated capacity of 225 steel CVJ units per hour, 0.12 gallons of paint per hour, and 0.08 gallons of quenchant per hour, using an oil mist collector to control particulate emissions from induction hardening and a water curtain to control particulate emissions from the spray paint booth, and exhausting to stacks HT21IH, HT21SPB, and HT21CO;
- (11) One (1) heat treat line HT22, identified as EU12, constructed in 1997, consisting of induction hardening, a spray paint booth, and a convection oven, with a rated capacity of 225 steel CVJ units per hour, 0.12 gallons of paint per hour, and 0.08 gallons of quenchant per hour, using an oil mist collector to control particulate emissions from induction hardening and dry filters to control particulate emissions from the spray paint booth, and exhausting to stacks HT22IH, HT22SPB, and HT22CO;
- (12) One (1) heat treat line HT23, identified as EU13, constructed in 1997, consisting of induction hardening, a spray paint booth, and a convection oven, with a rated capacity of 180 steel CVJ units per hour, 0.10 gallons of paint per hour, and 0.06 gallons of quenchant per hour, using an oil mist collector to control particulate emissions from induction hardening and a water curtain to control particulate emissions from the spray paint booth, and exhausting to stacks HT23IH, HT23SPB, and HT23CO;
- (13) One (1) heat treat line HT24, identified as EU14, constructed in 1997, consisting of induction hardening, a spray paint booth, and a convection oven, with a rated capacity of 225 steel CVJ units per hour, 0.12 gallons of paint per hour, and 0.08 gallons of quenchant per hour, using an oil mist collector to control particulate emissions from induction hardening and a water curtain to control particulate emissions from the spray paint booth, and exhausting to stacks HT24IH, HT24SPB, and HT24CO;
- (14) One (1) heat treat line HT25, identified as EU15, constructed in 2002, consisting of induction hardening, a spray paint booth, and a convection oven, with a rated capacity of 257 steel CVJ units per hour, 0.14 gallons of paint per hour, and 0.09 gallons of quenchant per hour, using an oil mist collector to control particulate emissions from induction hardening and a water curtain to control particulate emissions from the spray paint booth, and exhausting to stacks HT25IH, HT25SPB, and HT25CO;

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

SECTION D.3

FACILITY OPERATION CONDITIONS (Continued)

Facility Description: Heat Treat Lines, Bonderizing Line, and QA Process

- (15) One (1) Bonderizing line, identified as EU22, constructed in 1996, with a rated capacity of 11,340 pounds of steel CVJ units per hour, 4.06 pounds per hour of Formcoat 1B, 8.88 pounds per hour of Formcoat 1A, 4.92 pounds per hour of Freiclean 10M, and 2.48 pounds of sulfuric acid per hour, using an acid scrubber to control particulate emissions, and exhausting to stack Bonderizing; and
- (16) One (1) quality assurance process, identified as QA process, with a rated capacity of 2.30 pounds of sulfuric acid per hour;
- (19) Nine (9) heat treat induction hardening lines HT26 through HT34 (identified as EU32, 33, 34, 35, 36, 37, 38, 39, and 40), each with a maximum rated capacity of 257 steel CVJ units per hour, and 0.09 gallons of quenchant per hour, using an oil mist collector as control and exhausting at stacks HT26IH through HT34IH.
- (20) Two (2) prop shaft heat treat induction hardening lines HT35 and HT36 (identified as EU41 and 42), each with a maximum rated capacity of 257 steel CVJ units per hour, and 0.09 gallons of quenchant per hour, using an oil mist collector as control and exhausting at stacks HT35IH and HT36IH.
- (21) One (1) Bonderizing line #2 (identified as EU31), with a maximum rated capacity of 11,340 pounds of steel CVJ units per hour, 4.00 pounds per hour of Formcoat 1B, 8.94 pounds per hour of Formcoat 1A, 4.94 pounds per hour of Freiclean 10M, and 2.48 pounds of sulfuric acid per hour, using an acid scrubber as control and exhausting at stack Bonderizing #2.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

D.3.1 Particulate Emissions Limitations [326 IAC 6-3-2]

- (a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), particulate emissions from the Bonderizing Line (EU22 and EU31) and the induction hardening operations associated with the heat treat lines shall not exceed the listed pounds per hour emission limitations when operating at the process weight rates listed below:

Stack ID (Facility)	Process Weight Rate (lb/hr)	Process Weight Rate (ton/hr)	Particulate Emission Limit (lb/hr)
BJ1IH (EU5)	280	0.14	1.10
BJ2IH (EU6)	300	0.15	1.15
TJ2IH (EU7)	150	0.08	0.72
TJ3IH (EU8)	150	0.08	0.72
TJ4IH (EU9)	270	0.14	1.07

Stack ID (Facility)	Process Weight Rate (lb/hr)	Process Weight Rate (ton/hr)	Particulate Emission Limit (lb/hr)
Each of the twelve (12) emission units TJ6IH (EU10), HT26, HT27, HT28, HT29, HT30, HT31, HT32, HT33, HT34, HT35, and HT36	257	0.13	1.04
HT21IH (EU11)	225	0.11	0.95
HT22IH (EU12)	225	0.11	0.95
HT23IH (EU13)	180	0.09	0.82
HT24IH (EU14)	225	0.11	0.95
HT25IH (EU15)	257	0.13	1.04
Each of two Bonderizing Line (EU22 and EU31)	11,340	5.67	13.11

These pounds per hour limitations were calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

- (b) Particulate from the spray booths associated with heat treat lines BJ1(EU5), BJ2(EU6), TJ4(EU9), TJ6(EU10), and HT25(EU15) shall be controlled by dry particulate filters and the Permittee shall operate the control device in accordance with manufacturer's specifications.

If overspray is visibly detected at the exhaust or accumulates on the ground, the Permittee shall inspect the control device and do either of the following no later than four (4) hours after such an observation:

- (1) Repair control device so that no overspray is visible detectable at the exhaust or accumulates on the ground.
- (2) Operate equipment so that no overspray is visible detectable at the exhaust or accumulates on the ground.

If overspray is visibly detected, the Permittee shall maintain a record of the action taken as a result of the inspection, any repairs of the control device, or change in operations, so that overspray is not visibly detected at the exhaust or accumulates on the ground. These records must be maintained for five (5) years.

- (c) Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from the quality assurance process (identified as QA), not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than one hundred (100) pounds per hour and the methods in 326 IAC 6-3-21(b) through (d) do not apply shall not exceed 0.551 pounds per hour. This condition is not federally enforceable.

D.3.2 Volatile Organic Compounds (VOC) Limitations [326 IAC 8-2-9]

Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the Permittee shall not allow the discharge into the atmosphere VOC from heat treat lines BJ#2 (EU6) and TJ#3 (EU8) in excess of three and five-tenths (3.5) pounds of VOC per gallon of coating, excluding water, as delivered to the applicator, except to the extent allowed by the regulation.

D.3.3 Volatile Organic Compound (VOC) Limitations, Clean-up Requirements [326 IAC 8-2-9]

Pursuant to 326 IAC 8-2-9(f) (Miscellaneous Metal Coating Operations), all solvents sprayed from heat treat lines BJ#2 (EU6) and TJ#3 (EU8) application equipment during cleanup or color changes shall be directed into containers. Said containers shall be closed as soon as the solvent spraying is complete. In addition, all waste solvent shall be disposed of in such a manner that minimizes evaporation.

Compliance Determination Requirements

D.3.4 Particulate [326 IAC 6-3-2(d)]

- (a) In order to comply with D.3.1.(a), the fabric filters for particulate control shall be in operation and control emissions from the paint booths associated with the heat treat line BJ1 (EU5) at all times that the paint booths associated with the heat treat line BJ1 (EU5) is in operation.
- (b) In order to comply with D.3.1.(a), the water curtains for particulate control shall operation and control emissions from the paint booths associated with the heat treat lines BJ2 (EU5), TJ4 (EU9), TJ6 (EU10), and HT25 (EU15) at all times the paint booths associated with the heat treat lines BJ2 (EU5), TJ4 (EU9), TJ6 (EU10), and HT25 (EU15) are in operation.

D.3.5 Volatile Organic Compounds (VOC) [326 IAC 8-1-2] [326 IAC 8-1-4]

Compliance with heat treat lines BJ#2 (EU6) and TJ#3 (EU8) VOC content contained in Condition D.3.2 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the "as supplied" and "as applied" VOC data sheets. IDEM, OAQ reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures in 326 IAC 8-1-4.

Record Keeping and Reporting Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.3.6 Record Keeping Requirements

- (a) To document compliance with Condition D.3.2, the Permittee shall maintain records of the VOC content of each coating material and solvent used less water.
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.4

FACILITY OPERATION CONDITIONS

Facility Description: Degreasers

- (h) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6:
- (1) One (1) degreaser, identified as Degreaser 1 - Heat Treat South (EU17), constructed in 1996, with a rated capacity of 9 gallons;
 - (2) One (1) degreaser, identified as Degreaser 2 - Heat Treat North (EU18), constructed in 1996, with a rated capacity of 9 gallons;
 - (3) One (1) degreaser, identified as Degreaser 3 - Maintenance (EU19), constructed in 1996, with a rated capacity of 26 gallons;
 - (4) One (1) degreaser, identified as Degreaser 4 - Turnings North (EU20), constructed in 1996, with a rated capacity of 26 gallons;
 - (5) One (1) degreaser, identified as Degreaser 5 - Assembly South (EU21), constructed in 1996, with a rated capacity of 26 gallons;
 - (6) One (1) degreaser, identified as Degreaser 6 - Turnings South (EU22), constructed in 1996, with a rated capacity of 26 gallons;
 - (7) One (1) degreaser, identified as Degreaser 7 - Shaft Line Maintenance (EU23), constructed in 1996, with a rated capacity of 34 gallons;
 - (8) One (1) degreaser, identified as Degreaser 8 - Spindle Room (EU24), constructed in 1996, with a rated capacity of 78 gallons;
 - (9) One (1) degreaser, identified as Degreaser 9 - Forktruck Maintenance (EU25), constructed in 1996, with a rated capacity of 34 gallons;
 - (10) One (1) degreaser, identified as Degreaser 10 - Plant Maintenance (EU26), constructed in 1996, with a rated capacity of 34 gallons;
 - (11) One (1) degreaser, identified as Degreaser 11 - Die Shop (EU27), constructed in 1996, with a rated capacity of 17 gallons; and
 - (12) Three (3) cold parts washer DG#12 through 14 (identified as EU43, 44, and 45), each with a maximum rated capacity of nine (9) gallons.
 - (13) Five (5) cold parts washer DG#15 through 19 (identified as EU46, 47, 48, 49, and 50), each with a maximum rated capacity of twenty-six (26) gallons.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

D.4.1 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), for cold cleaning operations constructed after January 1, 1980, the Permittee shall:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements;
- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

D.4.2 Volatile Organic Compounds (VOC) [326 IAC 8-3-5]

- (a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), for cold cleaner degreaser operations without remote solvent reservoirs constructed after July 1, 1990, the Permittee shall ensure that the following control equipment requirements are met:
 - (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
 - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF));
 - (B) The solvent is agitated; or
 - (C) The solvent is heated.
 - (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
 - (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
 - (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
 - (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9EC) (one hundred twenty degrees Fahrenheit (120EF)):
 - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.

- (B) A water cover when solvent is used is insoluble in, and heavier than, water.
 - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), for cold cleaner degreaser operations without remote solvent reservoirs constructed after July 1, 1990, the Permittee shall ensure that the following control equipment requirements are met:
 - (1) Close the cover whenever articles are not being handled in the degreaser.
 - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
 - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

SECTION D.5

FACILITY OPERATION CONDITIONS

Facility Description: Boilers

- (i) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour:
 - (1) One (1) natural gas-fired boiler, identified as Bonderizing Boiler (B1), constructed in 1996, with a rated capacity of 4.2 million British thermal units per hour, and exhausting to stack B1;
 - (2) One (1) natural gas-fired boiler, identified as Parkerizing Boiler (B2), constructed in 1994, with a rated capacity of 2.1 million British thermal units per hour, and exhausting to stack B2;
 - (3) One (1) natural gas-fired boiler, identified as Administration Bldg (B3), constructed in 1994, with a rated capacity of 1.2 million British thermal units per hour, and exhausting to stack B3;
 - (4) One (1) natural gas-fired boiler, identified as Administration Bldg (B4), constructed in 1994, with a rated capacity of 1.2 million British thermal units per hour, and exhausting to stack B4;
 - (5) One (1) natural gas-fired boiler, identified as B5, constructed in 2000, with a rated capacity of 0.48 million British thermal units per hour, and exhausting to stack B5;
 - (6) One (1) natural gas-fired boiler, identified as B6, constructed in 1989, with a rated capacity of 0.6 million British thermal units per hour, and exhausting to stack B6;
 - (7) One (1) natural gas-fired boiler, identified as B7, constructed in 1989, with a rated capacity of 0.44 million British thermal units per hour, and exhausting to stack B7;
 - (8) One (1) natural gas-fired boiler, identified as B8, constructed in 1989, with a rated capacity of 0.18 million British thermal units per hour, and exhausting to stack B8;
 - (9) One (1) natural gas-fired boiler, identified as B9, constructed in 1989, with a rated capacity of 0.2 million British thermal units per hour, and exhausting to stack B9;
 - (10) One (1) natural gas-fired boiler, identified as B10, constructed in 1989, with a rated capacity of 0.2 million British thermal units per hour, and exhausting to stack B10;
 - (11) One (1) natural gas-fired boiler, identified as B11, constructed in 1989, with a rated capacity of 1.98 million British thermal units per hour, and exhausting to stack B11;
 - (12) One (1) natural gas-fired boiler, identified as B12, constructed in 2002, with a rated capacity of 0.2 million British thermal units per hour, and exhausting to stack B12;
 - (18) One (1) natural gas-fired boiler (identified as boiler B13), with a maximum heat input capacity of 4.20 MMBtu per hour, and exhausting at stack B13.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

D.5.1 Particulate [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), the particulate emissions from the following units shall be limited as follows:

Boiler	Emission Limitation (lb/MMBtu)
B6	0.6
B7	0.6
B8	0.6
B9	0.6
B10	0.6
B11	0.6
B2	0.6
B3	0.6
B4	0.6
B1	0.57
B5	0.56
B12	0.56
B13	0.52

The limitation for each boiler is lesser of 0.6 lb/MMBtu and the limit calculated using the equation below:

$$Pt = \frac{1.09}{Q^{0.26}}$$

where Pt = pounds of particulate matter emitted
per million Btu heat input (lb/MMBtu)
Q = Total source maximum operating
capacity rating (MMBtu/hr).

SECTION D.6

FACILITY OPERATION CONDITIONS

Facility Description: Combustion Sources

- (i) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour:
 - (13) Seventy-two (72) natural gas-fired space heaters, identified as UH1-72, with a combined rated maximum capacity of 7.71 million British thermal units per hour;
 - (14) Fifty-eight (58) natural gas-fired roof top air handlers, identified as RTAH1-58, with a combined rated maximum capacity of 24.63 million British thermal units per hour (note: each unit has a maximum capacity less than 10 million British thermal units per hour);
 - (15) Thirteen (13) natural gas-fired air make-up units, identified as MAU1-13, with a combined rated maximum capacity of 23.15 million British thermal units per hour (note: each unit has a maximum capacity less than 10 million British thermal units per hour);
 - (16) Three (3) natural gas-fired HVAC units, identified as A/C1-3, with a combined rated maximum capacity of 1.68 million British thermal units per hour; and
 - (17) Twenty-two (22) natural gas-fired miscellaneous units, identified as WH, with a combined rated maximum capacity of 4.15 million British thermal units per hour.
 - (19) Natural gas-fired combustion units consisting of unit space heaters, roof top air handlers, and air make-up units, with a combined heat input capacity of 101 MMBtu per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

There are no specifically applicable regulations that apply to these emission units.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE BRANCH**

**MINOR SOURCE OPERATING PERMIT
ANNUAL NOTIFICATION**

This form should be used to comply with the notification requirements under
326 IAC 2-6.1-5(a)(5).

Company Name:	NTN Driveshaft, Inc.
Address:	8251 S. International Dr.
City:	Columbus, Indiana 47201
Phone #:	(812) 342-7000
MSOP #:	005-14340-00066

NTN Driveshaft, Inc. is ☒ still in operation.
☐ no longer in operation.

NTN Driveshaft, Inc. is ☒ in compliance with the requirements of MSOP 005-14340-00066
☐ not in compliance with the requirements of MSOP 005-14340-00066

Authorized Individual (typed):
Title:
Signature:
Date:

MALFUNCTION REPORT
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
FAX NUMBER - 317 233-5967

**This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6
and to qualify for the exemption under 326 IAC 1-6-4.**

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE IT HAS POTENTIAL TO EMIT 25 TONS/YEAR PARTICULATE MATTER ?____, 25 TONS/YEAR SULFUR DIOXIDE ?____, 25 TONS/YEAR NITROGEN OXIDES?____, 25 TONS/YEAR VOC ?____, 25 TONS/YEAR HYDROGEN SULFIDE ?____, 25 TONS/YEAR TOTAL REDUCED SULFUR ?____, 25 TONS/YEAR REDUCED SULFUR COMPOUNDS ?____, 25 TONS/YEAR FLUORIDES ?____, 100TONS/YEAR CARBON MONOXIDE ?____, 10 TONS/YEAR ANY SINGLE HAZARDOUS AIR POLLUTANT ?____, 25 TONS/YEAR ANY COMBINATION HAZARDOUS AIR POLLUTANT ?____, 1 TON/YEAR LEAD OR LEAD COMPOUNDS MEASURED AS ELEMENTAL LEAD ?____, OR IS A SOURCE LISTED UNDER 326 IAC 2-5.1-3(2) ?____. EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION _____.

THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC _____ OR, PERMIT CONDITION # _____ AND/OR PERMIT LIMIT OF _____

THIS INCIDENT MEETS THE DEFINITION OF 'MALFUNCTION' AS LISTED ON REVERSE SIDE ? Y N

THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1) HOUR REPORTING REQUIREMENT ? Y N

COMPANY: _____ PHONE NO. (_____) _____

LOCATION: (CITY AND COUNTY) _____

PERMIT NO. _____ AFS PLANT ID: _____ AFS POINT ID: _____ INSP: _____
CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON: _____

DATE/TIME MALFUNCTION STARTED: ____/____/20____ _____ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: _____

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE ____/____/20____ _____ AM/PM

TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO2, VOC, OTHER: _____

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____

MEASURES TAKEN TO MINIMIZE EMISSIONS: _____

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL* SERVICES: _____

CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS: _____

CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT: _____

INTERIM CONTROL MEASURES: (IF APPLICABLE) _____

MALFUNCTION REPORTED BY: _____ TITLE: _____

(SIGNATURE IF FAXED)

NTN Driveshaft, Inc.
Columbus, Indiana
Permit Reviewer: ERG/KC

First Significant Permit Revision No.: 005-18032-00066
Revised by: ERG/SD

Page 37 of 38
MSOP 005-14340-00066

MALFUNCTION RECORDED BY: _____ DATE: _____ TIME: _____

*SEE PAGE 2

PAGE 1 OF 2

**Please note - This form should only be used to report malfunctions
applicable to Rule 326 IAC 1-6 and to qualify for
the exemption under 326 IAC 1-6-4.**

326 IAC 1-6-1 Applicability of rule

Sec. 1. This rule applies to the owner or operator of any facility required to obtain a permit under 326 IAC 2-5.1 or 326 IAC 2-6.1.

326 IAC 1-2-39 "Malfunction" definition

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner.

***Essential services** are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

Issued 2/05/04

**Indiana Department of Environmental Management
Office of Air Quality**

**Addendum to the Technical Support Document
for a Significant Permit Revision to a Minor Source Operating Permit**

Source Background and Description

Source Name:	NTN Driveshaft, Inc.
Source Location:	8251 South International Drive, Columbus, Indiana 47201
County:	Bartholomew
SIC Code:	3714
Operation Permit No.:	005-14340-00066
Operation Permit Issuance Date:	September 16, 2003
Significant Permit Revision No.:	005-18032-00066
Permit Reviewer:	ERG/SD

On December 18, 2003, the Office of Air Quality (OAQ) had a notice published in The Republic in Columbus, Indiana, stating that NTN Driveshaft, Inc. had applied for a Significant Permit Revision to a Minor Source Operating Permit to construct and operate several new emission units with control. The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On January 5, 2004, NTN Driveshaft, Inc. submitted comments on the proposed Significant Permit Revision. The summary of the comments is as follows. Bold text has been added while text with a line through it has been deleted. The Table of Contents was updated as needed.

Comment 1:

The source stated that they might apply for a Title V permit or a Federally Enforceable State Operating Permit (FESOP) after finishing the construction of the proposed new emission units. The source stated that the language in Condition B.7(e) - Minor Source Operating Permit limits the source to apply for a Title V permit only. The source requested a revision to Condition B.7(e) to allow the source applying for a FESOP or other appropriate operating permit when the source meets an applicability criterion of 326 IAC 2-7-2.

Response to Comment 1:

After constructing the proposed new units in this Significant Permit Revision, this source will have potential to emit criteria pollutants greater than the Part 70 permitting thresholds. Pursuant to 326 IAC 2-5.1-4(a)(1)(B), this source may operate under a MSOP if the source is subject to the Part 70 requirements under 326 IAC 2-7 and will submit a Part 70 permit application within twelve (12) months of the date of the source is approved to operate.

Also, pursuant to 326 IAC 2-8-2(a), a source may apply for a FESOP with federally enforceable

limits limiting emissions to below the applicability thresholds of a Part 70 permit. However, this source is still subject to the requirements of 326 IAC 2-7 (Part 70 Program) before receiving a FESOP. For clarification purposes, Condition B.7 has been revised as follows:

B.7 Minor Source Operating Permit [326 IAC 2-6.1]

This document shall also become a minor source operating permit pursuant to 326 IAC 2-6.1 when, prior to start of operation, the following requirements are met:

.

- (e) Pursuant to 326 IAC 2-7-4(a)(1)(A)(ii) and 326 IAC 2-5.1-4, the Permittee shall apply for a Title V operating permit **or receive a Federally Enforceable State Operating Permit (FESOP)** within twelve (12) months of the date on which the source first meets an applicability criterion of 326 IAC 2-7-2.

Comment 2:

The source stated that this plant was constructed in 1998 and is an asbestos-free plant. The source requested Condition C.5 - Asbestos Abatement Projects be removed from the permit.

The source also stated that if it is determined this Condition should remain in the permit, then Condition C.5(b)(1) should be revised as follows to be consistent with the requirements of 326 IAC 14-10-3(1)(A).

C.5 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

.....

- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
 - (1) When the amount of affected ~~asbestos-containing material~~ **RACM** increases or decreases by at least twenty percent (20%); or

.....

Response to Comment 2:

Condition C.5 - Asbestos Abatement Projects is a general condition which applies to every source. If the source does not have any regulated asbestos containing material (RACM) on site, then it is exempt from some of the notification and emission control requirements in this condition. Pursuant to 326 IAC 14-10-1(a) (Emission Standards for Asbestos; Demolition and Renovation Operations), the source shall comply with the notification requirements in 326 IAC 14-10-3 when a facility is being demolished, even if no asbestos containing material is present.

Pursuant to 326 IAC 14-10-3(1)(A), the Permittee shall provide a written notification of the intention to demolish or renovate when the amount of affected RACM increases or decreases by at least twenty percent (20%). For clarification purposes, Condition C.5 has been revised as follows to match the languages in the rule 326 IAC 14-10-3(1)(A):

C.5 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

...

- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
 - (1) When the amount of affected ~~asbestos-containing material~~ **RACM** increases or decreases by at least twenty percent (20%); or

..

Comment 3:

The source stated Condition C.11(a)(2), which requires the source to submit the annual emission statement for regulated pollutants, is a duplicated condition of Condition C.11(a)(1), which requires the source to submit the annual emission statement for criteria pollutants. The source stated that criteria pollutants are the same as regulated pollutants and requested Condition C.11(a)(2) be removed from the permit.

Response to Comment 3:

Condition C.11(a)(1) requires the source to submit actual emission data for "criteria pollutants", pursuant to 326 IAC 2-6. Condition C.11(a)(2) requires the source to submit actual emission data for "regulated pollutants", for purposes of Part 70 fee assessment. The regulated pollutants include criteria pollutants, and any pollutants subject to the requirements in Section 112(g), 112(j), and 112(r) of CAA, according to the definition in 326 IAC 2-7-1(31). Therefore, criteria pollutants are not the same as regulated pollutants. Therefore, no change has been made as a result of this comment.

Comment 4:

The source requested the visible emission notation requirement for the proposed scrubber (Condition D.1.7) be removed. The source stated that there was no visible emission notation requirement for the existing scrubber and that the existing scrubber is comparable to the proposed scrubber. The source also stated that low visible emissions were detected from the existing scrubber, and therefore, no visible emission notation should be required for the proposed scrubber. In addition, the source stated that they are operating 24 hours per day and visible emission notation is not possible during the night time shift.

Comment 5:

The source stated that the once per shift pressure drop monitoring requirement (Condition D.1.8) for the proposed scrubber is unnecessary and unduly burdensome. The source stated that once per day monitoring frequency is sufficient to ensure that the proposed scrubber is operating properly.

The source also stated that the monitoring requirements for the flow rate and pH value are not necessary. The pH of the water in the scrubber has no impact on the scrubber's control efficiency. The source requested the flow rate and the pH monitoring requirements be removed from Condition D.1.8.

Comment 6:

The source requested the scrubber inspection frequency in Condition D.1.9 be revised from quarterly to annually. The source stated that performing annual inspection for the proposed scrubber is sufficient based on the source's experience with the existing scrubber. The source indicated that the proposed scrubber will be used to control the emissions from CVJ forging presses, not rendering process.

Comment 7:

The source requested the record keeping requirements for the visible emission notation for the new scrubber (Condition D.1.11(b)) be removed. The source stated that the visible emission notation is not necessary for the new scrubber.

Comment 8:

The source requested the record keeping requirements for the flow rate and pH value of the new scrubber (Conditions D.1.11(c)(2) and (3)) be removed. The source stated that the once per day pressure drop monitoring is sufficient to ensure that the new scrubber is operating properly.

Response to Comments 4, 5, 6, 7, and 8:

The proposed scrubber will be used to control the particulate emissions from the new CVJ forging presses #3, #4, and #5. The potential to emit PM before control from each press is 3.59 lbs/hr (see the emission calculations in Appendix A of TSD), which is less than the allowable particulate emission limit of 12.2 lbs/hr for each press (see Condition D.1.1(a)). Therefore, the new CVJ forging presses #3, #4, and #5 could comply with the particulate emission limits of 12.2 lbs/hr without the use of the scrubber. Therefore, the visible emission notation, the parameter monitoring requirements for pressure drop, flow rate, and pH value, and the inspection requirements for the proposed scrubber have been removed from this permit as shown below:

~~D.1.5 Particulate Control~~

~~In order to comply with Conditions D.1.1, the venturi scrubber for particulate control shall be in operation and control emissions from each of the three (3) CVJ forging presses #3, #4, and #5 (identified as EU28, 29, and 30) at all times the three (3) CVJ forging presses #3, #4, and #5 are in operation.~~

~~D.1.65 Volatile Organic Compounds (VOC) [326 IAC 8-1-2] [326 IAC 8-1-4]~~

~~D.1.7 Visible Emissions Notations~~

- ~~(a) Once per shift visible emission notations of the venturi scrubber stack exhausts used in conjunction with the three (3) CVJ forging presses #3, #4, and #5 (identified as EU28, 29, and 30), shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.~~
- ~~(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.~~
- ~~(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.~~
- ~~(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for~~

that specific process.

- ~~_____ (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation and Implementation shall be considered a violation of this permit.~~

~~D.1.8 Monitoring of Scrubber Operational Parameters~~

~~_____ The Permittee shall monitor and record the pressure drop, flow rate and pH across the venturi scrubber used in conjunction with the three (3) CVJ forging presses #3, #4, and #5 (identified as EU28, 29, and 30), at least once per shift when the associated three (3) CVJ forging presses #3, #4, and #5 (identified as EU28, 29, and 30) are in operation when venting to the atmosphere. When for any one reading, the pressure drop across the venturi scrubber is outside the normal range of 3.0 and 5.0 inches of water, or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Implementation, Preparation, Records, and Reports. When for any one reading, the flow rate across the venturi scrubber is less than the normal minimum of 48 gallons per minute, respectively; or a minimum established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Implementation, Preparation, Records, and Reports. When for any one reading, the pH across the venturi scrubber is above the normal maximum pH level of 9.0, or a pH established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Implementation, Preparation, Records, and Reports.~~

~~_____ A pressure reading that is outside the above mentioned range, a flow rate that is below the above mentioned minimum, or pH above the mentioned maximum, is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports shall be considered a violation of this permit.~~

~~_____ The instruments used for determining the pressure, flow rate, and pH level shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.~~

~~D.1.9 Scrubber Inspections~~

~~_____ An inspection shall be performed each calendar quarter of each scrubber controlling the rendering process. Inspections required by this condition shall not be performed in consecutive months.~~

~~D.1.106 Failure Detection~~

~~D.1.117 Record Keeping Requirements~~

- ~~_____ (a) To document compliance with Condition D.1.2, the Permittee shall maintain records of the VOC content of each coating material and solvent used less water.~~
- ~~_____ (b) To document compliance with Condition D.1.7, the Permittee shall maintain records of visible emission notations of the three (3) CVJ forging presses, #3, #4, and #5 stack exhaust when venting to the atmosphere.~~
- ~~_____ (c) To document compliance with Condition D.1.8, the Permittee shall maintain records of the following operational parameters for the venturi scrubber once per shift during normal operation:~~
- ~~_____ (1) pressure drop;~~

_____ (2) _____ flow rate; and

_____ (3) _____ pH level.

_____ (d) _____ To document compliance with Condition D.1.9, the Permittee shall maintain records of the results of the inspections required under Condition D.1.9.

(eb) To document compliance with Condition D.1.4, the Permittee shall maintain records of any additional inspections prescribed by the Preventative Maintenance Plan.

(fc) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

Comment 9:

The source indicated that the maximum process rate for each shot blasting units EU51, EU52, and EU53 is 720 lbs/hr, not 119 lbs/hr. The source requested the process weight rate information in Condition D.2.1 for these units be corrected.

Response to 9:

In order to be consistent with the unit description in Condition A.2(g)(18), IDEM, OAQ has revised the process weight rate information for shot blasting units EU51, EU52, and EU53 in Condition D.2.1 as shown below. In addition, the particulate emission limit for each blasting unit has been revised to 2.07 lbs/hr when operating at a process weight rate of 720 pounds per hour. This particulate emission limit was calculated using the equation in 326 IAC 6-3-2.

D.2.1 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), particulate emissions from **each of** the three (3) shot blasting units (identified as EU51, 52, and 53) shall not each exceed **2.07** pounds per hour when operating at a process weight rate of **720** pounds per hour. The pounds per hour limitation was calculated using the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

Comment 10:

The source indicated that the unit identification (ID) numbers for several units in Condition D.3.1 are incorrect. The unit ID for units TJ2IH, TJ3IH, TJ4IH, TJ6IH, TH21H, TH22H, HT23H, and HT24H should be EU7 through EU14.

Response to 10:

IDEM, OAQ has made the following corrections to Condition D.3.1:

D.3.1 Particulate Emissions Limitations [326 IAC 6-3-2]

(a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), particulate emissions from the Bonderizing Line (EU22 and EU31) and the induction

hardening operations associated with the heat treat lines shall not exceed the listed pounds per hour emission limitations when operating at the process weight rates listed below:

Stack ID (Facility)	Process Weight Rate (lb/hr)	Process Weight Rate (ton/hr)	Particulate Emission Limit (lb/hr)
BJ1IH (EU5)	280	0.14	1.10
BJ2IH (EU6)	300	0.15	1.15
TJ2IH (EU67)	150	0.08	0.72
TJ3IH (EU68)	150	0.08	0.72
TJ4IH (EU69)	270	0.14	1.07
Each of the twelve (12) emission units TJ6IH (EU610), HT26, HT27, HT28, HT29, HT30, HT31, HT32, HT33, HT34, HT35, and HT36	257	0.13	1.04
HT21IH (EU611)	225	0.11	0.95
HT22IH (EU612)	225	0.11	0.95
HT23IH (EU613)	180	0.09	0.82
HT24IH (EU614)	225	0.11	0.95
HT25IH (EU15)	257	0.13	1.04
Each of two Bonderizing Line (EU22 and EU31)	11,340	5.67	13.11

issued 2/05/04

Indiana Department of Environmental Management Office of Air Quality

Technical Support Document (TSD) for a Significant Permit Revision to a Minor Source Operating Permit

Source Background and Description

Source Name:	NTN Driveshaft, Inc.
Source Location:	8251 South International Drive, Columbus, Indiana 47201
County:	Bartholomew
SIC Code:	3714
Operation Permit No.:	005-14340-00066
Operation Permit Issuance Date:	September 16, 2003
Significant Permit Revision No.:	005-18032-00066
Permit Reviewer:	ERG/SD

The Office of Air Quality (OAQ) has reviewed an application from NTN Driveshaft, Inc. relating to the construction and operation of a stationary source manufacturing constant velocity joints (CVJ) driveshaft parts and related components.

The following are new emission units:

- (a) Three (3) shot blasting units (identified as EU51, 52, and 53), each with a maximum rated capacity of 14 steel CVJ units per hour and 720 pounds of steel shot per hour, using three (3) baghouses that are integral to control, and exhausting at stacks CVJSB3 through CVJSB5.
- (b) Nine (9) heat treat induction hardening lines HT26 through HT34 (identified as EU32, 33, 34, 35, 36, 37, 38, 39, and 40), each with a maximum rated capacity of 257 steel CVJ units per hour, and 0.09 gallons of quenchant per hour, using an oil mist collector as control and exhausting at stacks HT26IH through HT34IH.
- (c) Two (2) prop shaft heat treat induction hardening lines HT35 and HT36 (identified as EU41 and 42), each with a maximum rated capacity of 257 steel CVJ units per hour, and 0.09 gallons of quenchant per hour, using an oil mist collector as control and exhausting at stacks HT35IH and HT36IH.
- (d) One (1) Bonderizing line #2 (identified as EU31), with a maximum rated capacity of 11,340 pounds of steel CVJ units per hour, 4.00 pounds per hour of Formcoat 1B, 8.94 pounds per hour of Formcoat 1A, 4.94 pounds per hour of Freiclean 10M, and 2.48 pounds of sulfuric acid per hour, using an acid scrubber as control and exhausting at stack Bonderizing #2.
- (e) Three (3) cold parts washer DG#12 through 14 (identified as EU43, 44, and 45), each with a maximum rated capacity of nine (9) gallons.

- (f) Five (5) cold parts washer DG#15 through 19 (identified as EU46, 47, 48, 49, and 50), each with a maximum rated capacity of twenty-six (26) gallons.
- (g) One (1) natural gas-fired boiler (identified as boiler B13), with a maximum heat input capacity of 4.20 MMBtu per hour, and exhausting at stack B13.
- (h) Natural gas-fired combustion units consisting of unit space heaters, roof top air handlers, and air make-up units, with a combined heat input capacity of 101 MMBtu per hour.
- (i) Three (3) CVJ forging presses #3, #4 and #5 (identified as EU28, 29, and 30), each with a maximum rated capacity of 1,200 steel billets per hour and 3.84 gallons of graphite lubricant per hour, using a venturi scrubber with an oil mist elimination chamber as control, and exhausting at stacks F5, F6 and F7.
- (j) Five (5) rust preventative coating lines RP#1 through 5 (identified as EU54, 55, 56, 57, and 58), each with a maximum rated capacity of 180 steel CVJ units per hour.

History

On September 30, 2003, NTN Driveshaft, Inc. submitted an application to the IDEM, OAQ requesting to construct and operate additional emission units related to the manufacturing of constant velocity joints (CVJ) driveshaft parts and related components as described above. After this modification, the potential to emit of PM10 and VOC are above the major source threshold of 100 tons per year.

NTN Driveshaft, Inc. was issued MSOP no. 005-14340-00066 on September 16, 2003. Therefore, within twelve (12) months after the issuance of this SPR, this stationary source is required to apply for a Part 70 permit by 326 IAC 2-7-2 (Applicability) because it is a major source, as defined in 326 IAC 2-7-1(22), or the source can request to operate under a Federally Enforceable State Operating Permit (FESOP) as defined in 326 IAC 2-8, which limits the potential to emit of each criteria pollutant to less than 100 tons per year.

Existing Approvals

The source was issued a MSOP no. 005-14340-00066 on September 16, 2003. No other air approvals have been issued since the issuance of that MSOP.

Air Pollution Control Justification as an Integral Part of the Process

In the source's current MSOP No. 005-14304-00066, issued September 16, 2003, the baghouses controlling the shot blasting units (identified as EU4, EU24, EU25) were considered to be an integral part of the shot blasting units. Since the three (3) new shot blasting units (identified as EU51, 52 and 53) are similar in design and operation, the source has requested the baghouses controlling these three (3) new shot blasting units (identified as EU51, 52 and 53) be considered as an integral part of the process. The following justifications were submitted by the source:

- (a) The purpose of the shot blast machines is to clean the parts for further machining, painting, or other processing. In all cases, a part free from fines is essential to quality in the process. The baghouse system evacuates the fines (from spent shot and scale removed from the parts) which would otherwise decrease the efficiency of the system by reducing the mass of the shot being thrown at the parts and by interfering with the contact of clean shot with the part surface. Operation of the shot blast system without the baghouse would immediately result in parts that do not meet the necessary standards for use in the subsequent operation.

- (b) The baghouses are necessary to the recycling of the shot blast media. The systems are designed for such recycling to take place and could not be operated otherwise. The recycling is performed because of the large rate of shot going through the system. If shot were not recycled, the system would run out of shot in less than one minute. Shot would need to be put into the system almost continuously if there were no recycling. This would result in the use of approximately 100,000 tons per year of shot. NTN currently uses about one drum of shot every 2-3 months. The steel shot costs \$375 per ton to replace. Therefore, the reuse of shot results in significant cost savings.
- (c) The baghouse protects the fan that creates the draft from the working surface. Without the baghouse filter, particulate would directly impact the fan blades and degrade them to the point where the draft required to evacuate the fines generated by the shot blast operation and damaged shot would be eliminated. If the damaged shot is not removed, it reduces the efficiency of the blast unit. This would result in parts that would not be accepted by the customer.
- (d) The baghouse systems are interlocked with the shot blasting units. The system is programmed to require that the baghouse system be activated for the shot blasting operation to start. Further, the system would have to be completely re-wired and reprogrammed to override the interlock.
- (e) Baghouses have been included in shot blaster design long before the environmental regulations existed. A Wheelabrator Co. catalog dating back to 1940 has been found showing shot blasters with baghouses. Use of baghouses decades before the Clean Air Act was in place demonstrates that the primary purposes of the baghouses were process considerations and not air pollution control. This also demonstrates that baghouses would be used even if no air pollution control laws applied.
- (f) Daily, monthly, semiannual, and annual inspections are performed on the baghouses. The daily inspections include inspecting the baghouse doors, seals, and discharge tubes from the hopper to the collection drums located below the dust collector, checking the fan, amp reading, and pressure drop prior to the cleaning cycle and after the cleaning cycle. NTN enters the dust collector on a monthly basis to inspect the condition of the bags. The accuracy of the manometer used to monitor the pressure drop is also checked. On a semiannual basis, the following items are inspected: the collector housing, cleaning system, filters, material discharge system, fan, and airflow rates. Annually, old filters are replaced with new ones.

IDEM, OAQ evaluated the justifications during the processing of MSOP no. 005-14340-00066 and agreed that the baghouses associated with the three (3) new shot blasting units (identified as EU 51, 52 and 53) should be considered as a integral part of the process based on the justifications listed above. Therefore, the permitting level is determined using the potential to emit after the baghouses.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the Significant Permit Revision to a MSOP be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on September 30, 2003.

Emission Calculations

The calculations submitted by the applicant have been verified and found to be accurate and correct. These calculations are provided in Appendix A of this document (Appendix A, pages 1 through 12).

Potential To Emit of Revision Before Controls

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency.”

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM*	62.0
PM10*	62.0
SO ₂	0.28
VOC	68.7
CO	38.6
NO _x	46.0

* PM and PM10 emissions are after the integral baghouses on the three (3) new shot balsting.

HAP's	Potential To Emit (tons/year)
Manganese	0.054
Phosphorous	9.46E-04
Nickel	0.10
Chromium	0.07
Hydrofloric Acid	0.003
Glycol Ether	0.10
Benzene	9.66E-04
Dichlorobenzene	5.52E-04
Formaldephyde	3.45E-02
Hexane	0.83
Toluene	1.56E-03
TOTAL	1.20

Justification for Permit Revision

This revision is being performed as a significant permit revision pursuant to 326 IAC 2-6.1-6(i)(1)(B)

because this modification results in the source needing to obtain a FESOP under 326 IAC 2-8 or a Part 70 permit under 326 IAC 2-7.

County Attainment Status

The source is located in Bartholomew County.

Pollutant	Status
PM10	Attainment
SO ₂	Attainment
NO ₂	Attainment
Ozone	Attainment
CO	Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Bartholomew County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (b) Bartholomew County has been classified as attainment or unclassifiable for all criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (c) Fugitive Emissions
Since this type of operation is not in one of the 28 listed source categories under 326 IAC 2-2, 40 CFR 52.21, or 326 IAC 2-3 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Source Status

Existing Source PSD Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/year)
PM*	79.2
PM10*	81.0
SO ₂	0.20
VOC	54.1
CO	27.3
NO _x	32.6

* PM and PM10 emissions are after the integral baghouses on the three (3) new shot blasting units.

- (a) This existing source is not a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not in one of the 28 listed source categories.
- (b) These emissions were based on potential to emit calculations as shown in Appendix A.

Proposed Modification

The PTE from the proposed modification (based on 8,760 hours of operation per year at rated capacity including enforceable emission control and production limit, where applicable) is as follows:

Pollutant	Potential to Emit (tons/year)					
	PM	PM10	SO ₂	VOC	CO	NO _x
Total Source Emissions From Existing Units	79.2	81.0	0.20	54.1	27.3	32.6
Proposed Modification						
Natural gas-fired combustion units	3.35	3.35	0.26	2.43	37.0	44.1
Natural gas-fired boiler	0.14	0.14	0.01	0.10	1.55	1.84
Three forging presses	47.1	47.1		60.4		
Nine heat treat lines	4.27	4.27		0.06		
One borderizing line # 2	4.46	4.46		0.78		
Eight degreasers				0.35		
Three shot blasting units	2.70	2.70				
Five RP coating lines				4.67		
Total Source Emissions with Modification	62.0	62.0	0.28	68.8	38.6	46.0
Total Source Emissions from All Emission Units	141	142	0.48	123	66.0	78.5
PSD Threshold Level	< 250	< 250	< 250	< 250	< 250	< 250

This modification to an existing minor stationary source is not major because the emission increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source is subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) at least one of the criteria pollutant is greater than or equal to 100 tons per year,
- (b) a single hazardous air pollutant (HAP) is greater than or equal to 10 tons per year, or
- (c) any combination of HAPs is greater than or equal to 25 tons/year.

This new source shall apply for a Part 70 (Title V) operating permit within twelve (12) months after this source becomes subject to Title V.

Federal Rule Applicability

- (a) One (1) natural gas-fired boiler (identified as B13) is not subject to the New Source Performance Standard, 40 CFR 60, Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units (326 IAC 12) because it has a maximum heat input capacity less than ten (10) MMBtu per hour.

There are no other New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.

- (b) The degreasers are not subject to the requirements of 40 CFR Part 63, Subpart T - National Emission Standards for Halogenated Solvent Cleaning because they use solvents that do not contain specified halogenated HAPs greater than five (5) percent by weight.

There are no other National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source.

- (c) The requirements of Section 112(j) of the Clean Air Act (40 CFR Part 63.50 through 63.56) are not applicable to this source because the source is not a major source of HAPs (i.e., the source does not have the potential to emit ten (10) tons per year or greater of a single HAP and twenty-five (25) tons per year or greater of a combination of HAPs).

State Rule Applicability - Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration (PSD))

NTN Driveshaft, Inc was constructed in 2003 and is not in one (1) of the twenty-eight (28) source categories. At construction, the potential to emit of each criteria pollutant before control was less than two hundred and fifty (250) tons per year PSD threshold. The source will be modified after the issuance of this permit, to construct and operate one (1) 4.20 MMBtu per hour natural gas-fired boiler, natural gas-fired combustion units (such as space heaters, roof top air handlers, and air make-up units) with a combined heat input capacity of 101 MMBtu per hour, three forging presses (press 3, 4 and 5), nine (9) heat treat induction hardening lines (EU32 through 40), two prop shaft heat treat induction hardening lines (EU41 and 42), one bonderizing line #2 (EU31), eight degreasers (EU 43 through 50), three shot blasting units (EU51 through 53), and five rust preventative lines (EU54 through EU58). After these modifications, the potential to emit of each criteria pollutant remains less than two hundred and fifty (250) tons per year. Therefore, the source is a minor source under PSD and the requirements of 326 IAC 2-2 are not applicable.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))

The operation of the constant velocity joints (CVJ) driveshaft parts and related components manufacturing plant will emit less than ten (10) tons per year of a single HAP and less than twenty-five (25) tons per year of any combination of HAPs. Therefore, the source is not subject to the requirements of 326 IAC 2-4.1.

326 IAC 2-6 (Emission Reporting)

This source will be subject to 326 IAC 2-6 (Emission Reporting), because the source has the potential to emit more than one hundred (100) tons per year of PM10 and VOC and is located in Bartholomew County. Pursuant to this rule, the Permittee must annually submit an emission statement for the source. The annual statement must be received by July 1 of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8)(Emission Statement Operating Year).

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity), opacity shall meet the following conditions unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - CVJ Forging Presses, Shot Blasting Units, Bonderizing Line #2

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

- (a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emissions from these facilities shall not exceed the listed pounds per hour emission limitations when operating at the process weight rates listed below:

Emission Unit	Capacity (steel billets/hr)	Conversion (lb/steel billet)	Process Weight Rate (lb/hr)	Process Weight Rate (ton/hr)	Particulate Emission Limit (lb/hr)
Each of the three (3) CVJ Forging Presses	1200	8.5	10200	5.10	12.2
Each of the three (3) Shot Blasting Units	14.0	8.5	119	0.059	0.61
One Bonderizing Line #2	---	---	11340	5.67	13.1

These pound per hour limitations were calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

326 IAC 8-1-6 (New Facilities - General Reduction Requirement)

- (a) Three (3) CVJ forging presses (identified as EU28, 29, and 30) each have potential emissions of VOC less than twenty-five (25) tons per year. Therefore, they are not subject to the requirements of 326 IAC 8-1-6 (New Facilities - General Reduction Requirement).
- (b) The one (1) bonderizing line #2 (identified as EU31) has potential emissions of VOC less than twenty-five (25) tons per year. Therefore, it is not subject to the requirements of 326 IAC 8-1-6 (New Facilities - General Reduction Requirement).

State Rule Applicability - Prop Shaft Lines, Heat Treat Lines

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emissions from nine (9) heat treat induction hardening lines (identified as EU32 through 40) and each of the two (2) prop shaft heat treat induction hardening lines (identified as EU 41 and 42) shall each not exceed 1.04 pounds per hour when operating at a process weight rate of 257 pounds per hour

This pound per hour limitations were calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

326 IAC 8-1-6 (New Facilities - General Reduction Requirement)

The nine (9) heat treat induction hardening lines (identified as EU32 through EU40) and two (2) prop shaft heat treat induction hardening lines (identified as EU41 and EU 42) each have potential emissions of VOC less than twenty-five (25) tons per year. Therefore, these emission units are not subject to the requirements of 326 IAC 8-1-6 (New Facilities - General Reduction Requirement).

State Rule Applicability - Rust Preventative Coating Lines

326 IAC 6-3 (Particulate Emission Limitations from Manufacturing Processes)

The five (5) rust preventative coating lines are not subject to 326 IAC 6-3-1 (Particulate Emission Limitations from Manufacturing Processes), because these lines use less than five (5) gallons of coating per day.

326 IAC 8-2-9 (Miscellaneous Metal Coating Operations)

The five (5) rust preventative coating lines RP#1 through 5 (identified as EU54, 55, 56, 57, and 58) are subject to the requirements of 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations) because these facilities have actual emissions greater than fifteen (15) pounds per day. Pursuant to this rule, the Permittee shall not allow the discharge into the atmosphere VOC in excess of three and five-tenths (3.5) pounds of VOC per gallon of coating, excluding water, as delivered to the applicator. Additionally, all solvents sprayed from the application equipment during cleanup or color changes shall be directed into containers. Said containers shall be closed as soon as the solvent spraying is complete. In addition, all waste solvent shall be disposed of in such a manner that minimizes evaporation.

State Rule Applicability - One (1) 4.20 MMBtu Per Hour Natural Gas-Fired Boiler

326 IAC 6-2-4 (a) (Particulate Emissions Limitations for Sources of Indirect Heating)

Pursuant to 326 IAC 6-2-4(a), the particulate emissions from the 4.20 MMBtu per hour natural gas-fired boiler (identified as B13), shall be limited to 0.52 pounds per MMBtu heat input.

This limitation is based on the following equation:

$$P_t = \frac{1.09}{Q^{0.26}}$$

where

Pt = emission rate limit (lbs per MMBtu)

Q = total source heat input capacity rating in MMBtu per hour (17.18 MMBtu per hour)

State Rule Applicability - Degreasers

326 IAC 8-1-6 (New Facilities - General Reduction Requirements)

The eight degreasers DG#12 through 19 (identified as EU 43, 44, 45, 46, 47, 48, 49, and 50) are not subject to the requirements of 326 IAC 8-1-6 (New Facilities - General Reduction Requirement) because they each have the potential emissions of VOC less than twenty five (25) tons per year.

326 IAC 8-3-2 (Cold Cleaner Operation)

The source is subject to 326 IAC 8-3-2 (Cold Cleaner Operation) and 326 IAC 8-3-5 (Cold Cleaner Degreaser Operation and Control) because the eight degreasers DG#12 through 19 (identified as EU 43, 44, 45, 46, 47, 48, 49, and 50) are new facilities after January 1, 1980 performing organic solvent degreasing operations in Bartholomew county as described in 326 IAC 8-3-1(a)(2); and they are existing facilities as of July 1, 1990 as described in 326 IAC 8-3-1(b)(2).

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), for cold cleaning facilities constructed after January 1, 1980, the Permittee shall:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements;
- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

326 IAC 8-3-5 (Cold Cleaner Degreaser Operation and Control)

- (a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), for cold cleaner degreaser operations without remote solvent reservoirs constructed after July 1, 1990, the Permittee shall ensure that the following control equipment requirements are met:
 - (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
 - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF));
 - (B) The solvent is agitated; or
 - (C) The solvent is heated.
 - (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
 - (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
 - (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
 - (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF)), or if

the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9EC) (one hundred twenty degrees Fahrenheit (120EF)):

- (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
 - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
 - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller of carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), for cold cleaner degreaser operations without remote solvent reservoirs constructed after July 1, 1990, the Permittee shall ensure that the following control equipment requirements are met:
- (1) Close the cover whenever articles are not being handled in the degreaser.
 - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
 - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

State Rule Applicability - Natural Gas-Fired Combustion Units

There are no specifically applicable regulations that apply to these emission units.

Proposed Changes

(Bold language has been added, language with a line through it has been deleted.)

A.2 Emissions Units and Pollution Control Equipment Summary

This stationary source is approved to operate the following emissions units and pollution control devices:

- (g) Emission units with PM and PM10 emissions less than five (5) tons per year, SO₂, NO_x, and VOC emissions less than ten (10) tons per year, CO emissions less than twenty-five (25) tons per year, and lead emissions less than two-tenths (0.2) tons per year:

.....
- (18) **Three (3) shot blasting units (identified as EU51, 52, and 53), each with a maximum rated capacity of 14 steel CVJ units per hour and 720 pounds of steel shot per hour, using three (3) baghouses that are integral to control, and exhausting at stacks CVJSB3 through CVJSB5.**
- (19) **Nine (9) heat treat induction hardening lines HT26 through HT34 (identified as EU32, 33, 34, 35, 36, 37, 38, 39, and 40), each with a maximum rated capacity of 257 steel CVJ units per hour, and 0.09 gallons of quenchant per hour, using an oil mist collector as control and exhausting at stacks HT26IH**

through HT34IH.

- (20) Two (2) prop shaft heat treat induction hardening lines HT35 and HT36 (identified as EU41 and 42), each with a maximum rated capacity of 257 steel CVJ units per hour, and 0.09 gallons of quenchant per hour, using an oil mist collector as control and exhausting at stacks HT35IH and HT36IH.
 - (21) One (1) Bonderizing line #2 (identified as EU31), with a maximum rated capacity of 11,340 pounds of steel CVJ units per hour, 4.00 pounds per hour of Formcoat 1B, 8.94 pounds per hour of Formcoat 1A, 4.94 pounds per hour of Freiclean 10M, and 2.48 pounds of sulfuric acid per hour, using an acid scrubber as control and exhausting at stack Bonderizing #2.
- (h) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6:
-
- (12) Three (3) cold parts washer DG#12 through 14 (identified as EU43, 44, and 45), each with a maximum rated capacity of nine (9) gallons.
 - (13) Five (5) cold parts washer DG#15 through 19 (identified as EU46, 47, 48, 49, and 50), each with a maximum rated capacity of twenty-six (26) gallons.
- (i) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour:
-
- (18) One natural gas-fired boiler (identified as boiler B13), with a maximum heat input capacity of 4.20 MMBtu per hour, and exhausting at stack B13.
 - (19) Natural gas-fired combustion units consisting of unit space heaters, roof top air handlers, and air make-up units, with a combined heat input capacity of 101 MMBtu per hour.
- (j) Three (3) CVJ forging presses #3, #4 and #5 (identified as EU28, 29, and 30), each with a maximum rated capacity of 12,00 steel billets per hour and 3.84 gallons of graphite lubricant per hour, using a venturi scrubber with an oil mist elimination chamber as control, and exhausting at stacks F5, F6 and F7.
 - (k) Five (5) rust preventative coating lines RP#1 through 5 (identified as EU54, 55, 56, 57, and 58), each with a maximum rated capacity of 180 steel CVJ units per hour.

A.3 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is a major source, as defined in 326 IAC 2-7-1(22);
- (b) It is an affected source under Title IV (Acid Deposition Control) of the Clean Air Act, as defined in 326 IAC 2-7-1(3);
- (c) It is a source in a source category designated by the United States Environmental

Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

B.1 Permit No Defense [IC 13]

This permit to **construct and** operate does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

B.45 Permit Term and Renewal [326 IAC 2-6.1-7(a)][326 IAC 2-1.1-9.5]

B.56 Modification to Permit [326 IAC 2]

B.7 Minor Source Operating Permit [326 IAC 2-6.1]

This document shall also become a minor source operating permit pursuant to 326 IAC 2-6.1 when, prior to start of operation, the following requirements are met:

- (a) The attached Affidavit of Construction shall be submitted to the Office of Air Quality (OAQ), Permit Administration & Development Section.
 - (1) If the Affidavit of Construction verifies that the facilities covered in this Construction Permit were constructed as proposed in the application, then the facilities may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM.
 - (2) If actual construction of the emission units differs from the construction proposed in the application, the source may not begin operation until the permit has been revised pursuant to 326 IAC 2-6.1-6 and 326 IAC 2-2 and an Operation Permit Validation Letter is issued.
- (b) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.
- (c) Upon receipt of the Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section, the Permittee shall attach it to this document.
- (d) The operation permit will be subject to annual operating permit fees pursuant to 326 IAC 2-7-19 (Fees).
- (e) Pursuant to 326 IAC 2-7-4(a)(1)(A)(ii) and 326 IAC 2-5.1-4, the Permittee shall apply for a Title V operating permit within twelve (12) months of the date on which the source first meets an applicability criterion of 326 IAC 2-7-2.

B.68 Annual Notification [326 IAC 2-6.1-5(a)(5)]

B.79 Preventive Maintenance Plan [326 IAC 1-6-3]

B.810 Permit Revision [326 IAC 2-5.1-3(e)(3)] [326 IAC 2-6.1-6]

B.11 Source Modification [326 IAC 2-7-10.5]

A modification, construction, or reconstruction is governed by 326 IAC 2 and 326 IAC 2-7-10.5.

B.912 Inspection and Entry [326 IAC 2-5.1-3(e)(4)(B)] [326 IAC 2-6.1-5(a)(4)][IC 13-14-2-2]

B.4013 Transfer of Ownership or Operation [326 IAC 2-6.1-6(d)(3)]

B.4114 Annual Fee Payment [326 IAC 2-1.1-7]

C.5 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

(a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

(b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:

(1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or

(2) If there is a change in the following:

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

(c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).

(d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Asbestos Section, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by an "authorized individual" as defined by 326 IAC 2-7-1(34).

(e) Procedures for Asbestos Emission Control

The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

(f) Demolition and Renovation

The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).

(g) Indiana Accredited Asbestos Inspector

The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Accredited Asbestos inspector is not federally enforceable.

C.56 Performance Testing [326 IAC 3-6]

C.67 Compliance Requirements [326 IAC 2-1.1-11]

C.78 Compliance Monitoring [326 IAC 2-1.1-11]

C.89 Monitoring Methods [326 IAC 3][40 CFR 60][40 CFR 63]

C.910 Malfunctions Report [326 IAC 1-6-2]

C.11 Emission Statement [326 IAC 2-6]

- (a)** The Permittee shall submit an annual emission statement certified pursuant to the requirements of 326 IAC 2-6, that must be received by July 1 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The annual emission statement shall meet the following requirements:

- (1)** Indicate estimated actual emissions of criteria pollutants from the source, in compliance with 326 IAC 2-6 (Emission Reporting);
- (2)** Indicate estimated actual emissions of regulated pollutants (as defined by 326 IAC 2-7-1(32) "Regulated pollutant which is used only for purposes of Section 19 of this rule") from the source, for purposes of Part 70 fee assessment.

- (b)** The annual emission statement covers the twelve (12) consecutive month time period starting January 1 and ending December 31. The annual emission statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

- (c)** The annual emission statement required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the

document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

The submittal by the Permittee does require the certification by the “authorized individual” as defined by 326 IAC 2-1.1-1.

C.4012 General Record Keeping Requirements [326 IAC 2-6.1-5]

C.4413 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description: Forging Presses, Shaft Line, and Parkerizing Line

.....

- (j) Three (3) CVJ forging presses #3, #4 and #5 (identified as EU28, 29, and 30), each with a maximum rated capacity of 12,00 steel billets per hour and 3.84 gallons of graphite lubricant per hour, using a venturi scrubber with an oil mist elimination chamber as control, and exhausting at stacks F5, F6 and F7.**
- (k) Five (5) rust preventative coating lines RP#1 through 5 (identified as EU54, 55, 56, 57, and 58), each with a maximum rated capacity of 180 steel CVJ units per hour.**

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards (326 IAC 2-6.1-5(a)(1))

D.1.1 Particulate Emissions Limitations [326 IAC 6-3-2]

- (a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), ~~the allowable particulate emissions rate~~ from these facilities shall not exceed the listed pounds per hour emission limitations when operating at the process weight rates listed below:

Unit	Process Weight Rate (lb/hr)	Process Weight Rate (ton/hr)	Particulate Emission Limit (lb/hr)
CVJ Forging Press #1 (EU1)	6885	3.44	9.38
CVJ Forging Press #2 (EU2)	6885	3.44	9.38
Hub Forging Press #1 (EU4(F1))	6300	3.15	8.84
Parkerizing Line (EU23)	4,369	2.18	6.92
Each of the three (3) CVJ Forging Presses #3, #4, #5 (EU 28, 29, and 30)	10,200	5.10	12.2

.....

- (b) Particulate from the spray booth associated with the sShaft ILine (EU16) shall be controlled by dry **particulate** filters and the Permittee shall operate the control device in accordance with manufacturer's specifications.

If overspray is visibly detected at the exhaust or accumulates on the ground, the Permittee shall inspect the control device and do either of the following no later than four (4) hours after such an observation:

- (1) Repair control device so that no overspray is visible detectable at the exhaust or accumulates on the ground.
- (2) Operate equipment so that no overspray is visible detectable at the exhaust or accumulates on the ground.

If overspray is visibly detected, the Permittee shall maintain a record of the action taken as a result of the inspection, any repairs of the control device, or change in operations, so that overspray is not visibly detected at the exhaust or accumulates on the ground. These records must be maintained for five (5) years.

D.1.2 Volatile Organic Compounds (VOC) Limitations [326 IAC 8-2-9]

Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the Permittee shall not allow the discharge into the atmosphere VOC from the shaft line (EU16) **and five (5) rust preventative coating lines RP#1 through 5 (identified as EU54, 55, 56, 57, and 58)** in excess of three and five-tenths (3.5) pounds of VOC per gallon of coating, excluding water, as delivered to the applicator, except to the extent allowed by the regulation.

D.1.3 Volatile Organic Compound (VOC) Limitations, Clean-up Requirements [326 IAC 8-2-9]

Pursuant to 326 IAC 8-2-9(f) (Miscellaneous Metal Coating Operations), all solvents sprayed from the shaft line (EU16) **and five (5) rust preventative coating lines RP#1 through 5 (identified as EU54, 55, 56, 57, and 58)** application equipment during cleanup or color changes shall be directed into containers. Said containers shall be closed as soon as the solvent spraying is complete. In addition, all waste solvent shall be disposed of in such a manner that minimizes evaporation.

Compliance Determination Requirements

D.1.5 Particulate Control

In order to comply with Conditions D.1.1, the venturi scrubber for particulate control shall be in operation and control emissions from each of the three (3) CVJ forging presses #3, #4, and #5 (identified as EU28, 29, and 30) at all times the three (3) CVJ forging presses #3, #4, and #5 are in operation.

D.1.56 Volatile Organic Compounds (VOC) [326 IAC 8-1-2] [326 IAC 8-1-4]

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.1.7 Visible Emissions Notations

- (a) Once per shift visible emission notations of the venturi scrubber stack exhausts used in conjunction with the three (3) CVJ forging presses #3, #4, and #5 (identified as EU28, 29, and 30), shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing,

or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation and Implementation shall be considered a violation of this permit.

D.1.8 Monitoring of Scrubber Operational Parameters

The Permittee shall monitor and record the pressure drop, flow rate and pH across the venturi scrubber used in conjunction with the three (3) CVJ forging presses #3, #4, and #5 (identified as EU28, 29, and 30), at least once per shift when the associated three (3) CVJ forging presses #3, #4, and #5 (identified as EU28, 29, and 30) are in operation when venting to the atmosphere. When for any one reading, the pressure drop across the venturi scrubber is outside the normal range of 3.0 and 5.0 inches of water, or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Implementation, Preparation, Records, and Reports. When for any one reading, the flow rate across the venturi scrubber is less than the normal minimum of 48 gallons per minute, respectively; or a minimum established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Implementation, Preparation, Records, and Reports. When for any one reading, the pH across the venturi scrubber is above the normal maximum pH level of 9.0, or a pH established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Implementation, Preparation, Records, and Reports.

A pressure reading that is outside the above mentioned range, a flow rate that is below the above mentioned minimum, or pH above the mentioned maximum, is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports shall be considered a violation of this permit.

The instruments used for determining the pressure, flow rate, and pH level shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.1.9 Scrubber Inspections

An inspection shall be performed each calendar quarter of each scrubber controlling the rendering process. Inspections required by this condition shall not be performed in consecutive months.

D.1.10 Failure Detection

In the event that a scrubber malfunction has been observed:

Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports shall be considered a violation of this permit.

Record Keeping and Reporting Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.1.611 Record Keeping Requirements

-
- (a) To document compliance with Condition D.1.2, the Permittee shall maintain records of the VOC content of each coating material and solvent used less water.
- (b) **To document compliance with Condition D.1.7, the Permittee shall maintain records of visible emission notations of the three (3) CVJ forging presses, #3, #4, and #5 stack exhaust when venting to the atmosphere**
- (c) **To document compliance with Condition D.1.8, the Permittee shall maintain records of the following operational parameters for venturi scrubber once per shift during normal operation:**
- (1) **pressure drop;**
 - (2) **flow rate; and**
 - (3) **pH level.**
- (d) **To document compliance with Condition D.1.9, the Permittee shall maintain records of the results of the inspections required under Condition D.1.9.**
- (be) To document compliance with Condition D.1.4, the Permittee shall maintain records of any additional inspections prescribed by the Preventative Maintenance Plan.
- (ef) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.2

FACILITY OPERATION CONDITIONS

Facility Description: Shot Blasters

- (g) Emission units with PM and PM10 emissions less than five (5) tons per year, SO₂, NO_x, and VOC emissions less than ten (10) tons per year, CO emissions less than twenty-five (25) tons per year, and lead emissions less than two-tenths (0.2) tons per year:

. . . .

- (18) **Three (3) shot blasting units (identified as EU51, 52, and 53), each with a maximum rated capacity of 14 steel CVJ units per hour and 720 pounds of steel shot per hour, using three (3) baghouses that are integral to control, and exhausting at stacks CVJSB3 through CVJSB5.**

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

D.2.1 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), particulate emissions from the three (3) shot blasting units (identified as EU51, 52, and 53) shall not each exceed 0.61 pounds per hour when operating at a process weight rate of 119 pounds per hour. The pounds per hour limitation was calculated using the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where} \quad E = \text{rate of emission in pounds per hour; and} \quad P = \text{process weight rate in tons per hour}$$

D.2.2 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and their control device.

Compliance Determination Requirements

D.2.43 Particulate Control [326 IAC 6-3-2]

- (a) The integral fabric filters shall be in operation at all times that the Hub Shot Blaster (EU4(F2)), My Shot Blaster 1 (EU24), My Shot Blaster 2 (EU25), and shot blasters CVJ #1 and CVJ #2 are in operation in order to ensure exemption from the requirements of 326 IAC 6-3-2.
- (b) In order to comply with D.2.1, the three (3) integral baghouses for particulate control shall be in operation and control emissions from the three (3) shot blasting units (identified as EU51, 52, and 53) at all times that the three (3) shot blasting units (identified as EU51, 52, and 53) are in operation.

SECTION D.3

FACILITY OPERATION CONDITIONS (Continued)

Facility Description: Heat Treat Lines, Bonderizing Line, and QA Process

- (g) Emission units with PM and PM10 emissions less than five (5) tons per year, SO₂, NO_x, and VOC emissions less than ten (10) tons per year, CO emissions less than twenty-five (25) tons per year, and lead emissions less than two-tenths (0.2) tons per year:

.....

- (19) **Nine (9) heat treat induction hardening lines HT26 through HT34 (identified as EU32, 33, 34, 35, 36, 37, 38, 39, and 40), each with a maximum rated capacity of 257 steel CVJ units per hour, and 0.09 gallons of quenchant per hour, using an oil mist collector as control and exhausting at stacks HT26IH through HT34IH.**
- (20) **Two (2) prop shaft heat treat induction hardening lines HT35 and HT36 (identified as EU41 and 42), each with a maximum rated capacity of 257 steel CVJ units per hour, and 0.09 gallons of quenchant per hour, using an oil mist collector as control and exhausting at stacks HT35IH and HT36IH.**
- (21) **One (1) Bonderizing line #2 (identified as EU31), with a maximum rated capacity of 11,340 pounds of steel CVJ units per hour, 4.00 pounds per hour of Formcoat 1B, 8.94 pounds per hour of Formcoat 1A, 4.94 pounds per hour of Freiclean 10M, and 2.48 pounds of sulfuric acid per hour, using an acid scrubber as control and exhausting at stack Bonderizing #2.**

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

D.3.1 Particulate Emissions Limitations [326 IAC 6-3-2]

- (a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), ~~the allowable particulate emissions rate~~ from the Bonderizing Line (**EU22 and EU31**) and the induction hardening operations associated with the heat treat lines shall not exceed the listed pounds per hour emission limitations when operating at the process weight rates listed below:

Stack ID (Facility)	Process Weight Rate (lb/hr)	Process Weight Rate (ton/hr)	Particulate Emission Limit (lb/hr)
BJ1IH (EU5)	280	0.14	1.10
BJ2IH (EU6)	300	0.15	1.15
TJ2IH (EU6)	150	0.08	0.72
TJ3IH (EU6)	150	0.08	0.72
TJ4IH (EU6)	270	0.14	1.07

Stack ID (Facility)	Process Weight Rate (lb/hr)	Process Weight Rate (ton/hr)	Particulate Emission Limit (lb/hr)
Each of the twelve (12) emission units TJ6IH (EU6), HT26, HT27, HT28, HT29, HT30, HT31, HT32, HT33, HT34, HT35, and HT36	257	0.13	1.04
HT21IH (EU6)	225	0.11	0.95
HT22IH (EU6)	225	0.11	0.95
HT23IH (EU6)	180	0.09	0.82
HT24IH (EU6)	225	0.11	0.95
HT25IH (EU15)	257	0.13	1.04
Each of two Bonderizing Line (EU22 and EU31)	11,340	5.67	13.11

....

- (b) Particulate from the spray booths associated with heat treat lines BJ1(EU5), BJ2(EU6), TJ4(EU9), TJ6(EU10), and HT25(EU15) shall be controlled by dry **particulate** filters and the Permittee shall operate the control device in accordance with manufacturer's specifications.

....

- (c) Pursuant to 326 IAC 6-3-2(e)(2), ~~the allowable~~ particulate emissions ~~rate~~ from the quality assurance process (**identified as QA**), not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than one hundred (100) pounds per hour and the methods in 326 IAC 6-3-21(b) through (d) do not apply shall not exceed 0.551 pounds per hour. This condition is not federally enforceable.

D.3.4 Particulate [326 IAC 6-3-2(d)]

- (a) **In order to comply with D.3.1.(a), the** ~~Pursuant to 326 IAC 6-3-2(d), particulate from the paint booths associated with heat treat line BJ1 (EU5) shall be controlled by fabric filters~~ **for particulate control shall be in operation and the control emissions from the heat treat line BJ1(EU5) at all times that the heat treat line BJ1(EU5) is in operation. from the paint booths associated with the heat treat line BJ1 (EU5) at all times that the paint booths associated with heat treat line BJ1 (EU5) is in operation.**
- (b) **In order to comply with D.3.1.(a), the** ~~In order to comply with D.3.1.(a), the particulate from the paint booths associated with heat treat lines BJ2(EU5), TJ4(EU9), TJ6(EU10), and HT25(EU15) shall be controlled by water curtains~~ **for particulate control and the Permittee shall be in operation and the control emissions devices in accordance with manufacturer's specifications from the paint booths associated with the heat treat lines BJ2 (EU5), TJ4 (EU9), TJ6 (EU10), and HT25 (EU15) at all times the paint booths associated with the heat treat lines BJ2 (EU5), TJ4 (EU9), TJ6 (EU10), and HT25 (EU15) are in operation.**

SECTION D.4 FACILITY OPERATION CONDITIONS

Facility Description: Degreasers

- (h) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6:

.....

- (12) Three (3) cold parts washer DG#12 through 14 (identified as EU43, 44, and 45), each with a maximum rated capacity of nine (9) gallons.
- (13) Five (5) cold parts washer DG#15 through 19 (identified as EU46, 47, 48, 49, and 50), each with a maximum rated capacity of twenty-six (26) gallons.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

SECTION D.5 FACILITY OPERATION CONDITIONS

Facility Description: Boilers

- (i) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour:

.....

- (18) One natural gas-fired boiler (identified as boiler B13), with a maximum heat input capacity of 4.20 MMBtu per hour, and exhausting at stack B13.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

D.5.1 Particulate [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), the particulate emissions from the following units shall be limited as follows:

Boiler	Emission Limitation (lb/MMBtu)
B6	0.6
B7	0.6
B8	0.6
B9	0.6
B10	0.6
B11	0.6
B2	0.6

Boiler	Emission Limitation (lb/MMBtu)
B3	0.6
B4	0.6
B1	0.57
B5	0.56
B12	0.56
B13	0.52

The limitation for each boiler is lesser of 0.6 lb/MMBtu and the limit calculated using the equation below:

$$Pt = \frac{1.09}{Q^{0.26}}$$

$$Q^{0.26}$$

where Pt = pounds of particulate matter emitted
per million Btu heat input (lb/MMBtu)
 Q = total source maximum operating capacity rating (MMBtu/hr).

SECTION D.6

FACILITY OPERATION CONDITIONS

Facility Description: Combustion Sources

- (i) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour:

....

- (19) Natural gas-fired combustion units consisting of unit space heaters, roof top air handlers, and air make-up units, with a combined heat input capacity of 101 MMBtu per hour.**

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

There are no specific ~~ally regulations~~ applicable **regulations that apply** to these **emission** units.

Conclusion

The construction of this proposed modification shall be subject to the conditions of the attached proposed MSOP Significant Permit Revision 005-18032-00066.

**Appendix A: Emission Calculations
Natural Gas Combustion Only
Space Heaters, Roof Top Air Handlers, Air Make-Up Units,**

Company Name: NTN Driveshaft, Inc.

Address: 8251 South International Drive, Columbus, Indiana 47201

SPR to MSOP: 005-18032

Plt ID: 005-00066

Reviewer: ERG/SD

Date: October 17, 2003

Total Heat Input Capacity
MMBtu/hour

Potential Throughput
MMCF/year

101

883

Pollutant						
	* PM	* PM10	SO ₂	** NO _x	VOC	CO
Emission Factor (lb/MMCF)	7.6	7.6	0.6	100	5.5	84.0
Potential To Emit (tons/year)	3.35	3.35	0.26	44.1	2.43	37.1

*PM and PM10 emission factors are filterable and condensible PM and PM10 combined.

**Emission Factors for NO_x: Uncontrolled = 100 lb/MMCF.

All Emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors from AP-42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (July, 1998).

METHODOLOGY

Potential Throughput (MMCF/year) = Heat Input Capacity (MMBtu/hr) * 8760 hours/year * 1 MMCF/1000 MMBtu

Potential To Emit (tons/year) = Potential Throughput (MMCF/year) * Emission Factor (lb/MMCF) * 1 ton//2000 lbs

See next page for HAPs emissions calculations.

**Appendix A: Emission Calculations
Natural Gas Combustion Only
Space Heaters, Roof Top Air Handlers, Air Make-Up Units,**

Company Name: NTN Driveshaft, Inc.

Address: 8251 South International Drive, Columbus, Indiana 47201

SPR to MSOP: 005-18032

Plt ID: 005-00066

Reviewer: ERG/SD

Date: October 17, 2003

HAPs - Organics

Emission Factor (lb/MMCF)	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential To Emit (tons/year)	9.27E-04	5.30E-04	3.31E-02	7.95E-01	1.50E-03

HAPs - Metals

Emission Factor (lb/MMCF)	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential To Emit (tons/year)	2.21E-04	4.86E-04	6.18E-04	1.68E-04	9.27E-04

Methodology is the same as previous page.

The five highest organic and metal HAPs emission factors as provided above are from AP-42, Chapter 1.4, Table 1-4.2, 1.4-3 and 1.4-4 (July, 1998). Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emission Calculations
Natural Gas Combustion Only
One (1) Boiler identified as B-13

Company Name: NTN Driveshaft, Inc.

Address: 8251 South International Drive, Columbus, Indiana 47201

SPR to MSOP: 005-18032

Plt ID: 005-00066

Reviewer: ERG/SD

Date: October 17, 2003

Total Heat Input Capacity
MMBtu/hour

4.20

Potential Throughput
MMCF/year

36.8

Pollutant						
Emission Factor (lb/MMCF)	* PM 7.6	* PM10 7.6	SO ₂ 0.6	** NO _x 100	VOC 5.5	CO 84.0
Potential To Emit (tons/year)	0.14	0.14	0.01	1.8	0.10	1.55

*PM and PM10 emission factors are filterable and condensable PM and PM10 combined.

**Emission Factors for NO_x: Uncontrolled = 100 lb/MMCF.

All Emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors from AP-42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (July, 1998).

METHODOLOGY

Potential Throughput (MMCF/year) = Heat Input Capacity (MMBtu/hr) * 8760 hours/year * 1 MMCF/1000 MMBtu

Potential To Emit (tons/year) = Potential Throughput (MMCF/year) * Emission Factor (lb/MMCF) * 1 ton//2000 lbs

See next page for HAPs emissions calculations.

Appendix A: Emission Calculations
Natural Gas Combustion Only
One (1) Boiler identified as B-13

Company Name: NTN Driveshaft, Inc.

Address: 8251 South International Drive, Columbus, Indiana 47201

SPR to MSOP: 005-18032

Pit ID: 005-00066

Reviewer: ERG/SD

Date: October 17, 2003

HAPs - Organics

Emission Factor (lb/MMCF)	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential To Emit (tons/year)	3.86E-05	2.21E-05	1.38E-03	3.31E-02	6.25E-05

HAPs - Metals

Emission Factor (lb/MMCF)	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential To Emit (tons/year)	9.20E-06	2.02E-05	2.58E-05	6.99E-06	3.86E-05

Methodology is the same as previous page.

The five highest organic and metal HAPs emission factors as provided above are from AP-42, Chapter 1.4, Table 1-4.2, 1.4-3 and 1.4-4 (July, 1998). Additional HAPs emission factors are available in AP-42, Chapter 1.4.

**Appendix A: Emissions Calculations
Forging Press Emissions**

Page 5 of 12 TSD App A

Company Name: NTN Driveshaft, Inc.

Address: 8251 South International Drive, Columbus, Indiana 47201

SPR to MSOP: 005-18032

Pit ID: 005-00066

Reviewer: ERG/SD

Date: October 17, 2003

Potential To Emit of PM and PM10

Unit ID	Emission Unit	Unit Capacity (parts/hour)	Max. Usage Rate (gal/part)	Density (lb/gal)	% Solids	Dispersion (%)	Uncontrolled PTE of PM/PM10 (lb/hour)	Uncontrolled PTE of PM/PM10 (tons/year)	Control Efficiency	Controlled PTE of PM/PM10 (tons/year)
EU28	CVJ Forging Press #3	1200	0.0032	8.59	23%	47%	3.59	15.7	95%	0.79
EU29	CVJ Forging Press #4	1200	0.0032	8.59	23%	47%	3.59	15.7	95%	0.79
EU30	CVJ Forging Press #5	1200	0.0032	8.59	23%	47%	3.58	15.7	95%	0.78
Total								47.1		2.36

Assume all PM emissions are equal to PM10

Control = Venturi Scrubber

METHODOLOGY

Uncontrolled PTE of PM/PM10 (lbs/hour) = Unit Capacity (parts/hour) * Max Usage Rate (gal/part) * Density (lb/gal) * Weight % Solids * % Dispersion

Uncontrolled PTE of PM/PM10 (tons/year) = Unit Capacity (parts/hour) * Max Usage Rate (gal/part) * Density (lb/gal) * Weight % Solids * % Dispersion * 8760 hours/year * 1ton/2000 lbs

Controlled PTE of PM/PM10 (tons/year) = Uncontrolled PTE of PM/PM10 (tons/year) * (1-Control Efficiency %)

Potential To Emit VOC

Unit ID	Emission Unit	Unit Capacity (parts/hour)	Gallons of Coating per Part	Pounds VOC per Gallon	VOC Released (%)	PTE of VOC (lb/hour)	PTE of VOC (tons/year)
EU28	CVJ Forging Press #3	1200	0.0032	1.19	100%	4.59	20.1
EU29	CVJ Forging Press #4	1200	0.0032	1.19	100%	4.59	20.1
EU30	CVJ Forging Press #5	1200	0.0032	1.19	100%	4.59	20.1
Total						13.8	60.4

METHODOLOGY

PTE of VOC (lb/hour) = Unit Capacity (parts/hour) * Gal of Coating per Part * Pounds VOC per Gallon * VOC released %

PTE of VOC (tons/year) = Unit Capacity (parts/hour) * Gal of Coating per Part * Pounds VOC per Gallon * VOC released % * 8760 hours/year * 1 ton/2000 lbs

**Appendix A: Emissions Calculations
PM/PM10 Emissions From
Induction Hardening Emissions**

Company Name: NTN Driveshaft, Inc.
Address: 8251 South International Drive, Columbus, Indiana 47201
SPR to MSOP: 005-18032
Plt ID: 005-00066
Reviewer: ERG/SD
Date: October 17, 2003

Total Quenchant Used

50,038 pounds of quenchant used in 2001
 8,947 pounds of quenchage for make-up in 2001
 58,985 total pounds of quenchant used in 2001
 7,240 hours of operation in 2001
 71,369 maximum pounds quenchant used if operated 8,760 hours per year

Quenchant Properties

1.095 specific gravity of quenchant
 9.12 density (lb/gal)
 0.45 water content of quenchant
 0.61 solids content of quenchant
 0.08 pounds VOC per gallon of quenchant

Quenchant Disposed Of

5,200 gallons of quenchant disposed of in 2001
 7,240 hours of operation in 2001
 6,292 maximum gallons quenchant disposed of if operated 8,760 hours per year
 57,380 pounds of quenchant disposed of

Mass Balance Calculations for Heat Treat Lines

71,369 pounds of quenchant used
 57,380 pounds of quenchant disposed of
 13,988 total pounds of quenchant unaccounted for
 6.99 total tons of quenchant unaccounted for per year

Potential To Emit PM/PM10

Unit ID	Emission Units	Unit Capacity (parts/hour)	Solids Content of Quenchant (%)	Total Tons of Quenchant Unaccounted for Per Year	Uncontrolled PTE of PM/PM10 (tons/year)	Control Efficiency %	Controlled PTE of PM/PM10 (tons/year)
EU32	HT#26 Induction Hardening	257	0.61	6.99	0.39	99%	0.0039
EU33	HT#27 Induction Hardening	257	0.61	6.99	0.39	99%	0.0039
EU34	HT#28 Induction Hardening	257	0.61	6.99	0.39	99%	0.0039
EU35	HT#29 Induction Hardening	257	0.61	6.99	0.39	99%	0.0039
EU36	HT#30 Induction Hardening	257	0.61	6.99	0.39	99%	0.0039
EU37	HT#31 Induction Hardening	257	0.61	6.99	0.39	99%	0.0039
EU38	HT#32 Induction Hardening	257	0.61	6.99	0.39	99%	0.0039
EU39	HT#33 Induction Hardening	257	0.61	6.99	0.39	99%	0.0039
EU40	HT#34 Induction Hardening	257	0.61	6.99	0.39	99%	0.0039
EU41	HT#35 Prop Shaft Heat Treat	257	0.61	6.99	0.39	99%	0.0039
EU42	HT#36 Prop Shaft Heat Treat	257	0.61	6.99	0.39	99%	0.0039
Total		2827			4.27		0.043

Assume all PM emissions are equal to PM10

Control = Oil Mist Collectors

METHODOLOGY

Uncontrolled PTE of PM/PM10 (tons/year) = Unit Capacity (parts/hour) * Solids Content of Quenchant % * Tons Quenchant Unaccounted For * 1/ Total Parts/hour

Controlled PTE of PM/PM10 (tons/year) = Uncontrolled PTE of PM/PM10 (tons/year) * (1- Control Efficiency %)

Appendix A: Emissions Calculations
VOC Emissions From
Induction Hardening Emissions

Company Name: NTN Driveshaft, Inc.

Address: 8251 South International Drive, Columbus, Indiana 47201

SPR to MSOP: 005-18032

Plt ID: 005-00066

Reviewer: ERG/SD

Date: October 17, 2003

Potential To Emit VOC

Unit ID	Emission Unit	Unit Capacity (parts/hour)	Pounds VOC Per Gallon of Quenchant	Total Tons of Quenchant Unaccounted for Per Year	Density (lb/gal)	PTE of VOC (tons/year)
EU32	HT#26 Induction Hardening	257	0.08	6.99	9.12	0.01
EU33	HT#27 Induction Hardening	257	0.08	6.99	9.12	0.01
EU34	HT#28 Induction Hardening	257	0.08	6.99	9.12	0.01
EU35	HT#29 Induction Hardening	257	0.08	6.99	9.12	0.01
EU36	HT#30 Induction Hardening	257	0.08	6.99	9.12	0.01
EU37	HT#31 Induction Hardening	257	0.08	6.99	9.12	0.01
EU38	HT#32 Induction Hardening	257	0.08	6.99	9.12	0.01
EU39	HT#33 Induction Hardening	257	0.08	6.99	9.12	0.01
EU40	HT#34 Induction Hardening	257	0.08	6.99	9.12	0.01
EU41	HT#35 Prop Shaft Heat Treat	257	0.08	6.99	9.12	0.01
EU42	HT#36 Prop Shaft Heat Treat	257	0.08	6.99	9.12	0.01
Total		2827		76.9		0.061

METHODOLOGY

PTE of VOC (tons/year) = Unit Capacity (parts/hour) * Pounds VOC Per Gallon of Quenchant * Total Tons of Quenchant Unaccounted for Per Year * 1/ Density (lb/gal) * 1/Total Parts/hour

**Appendix A: Emissions Calculations
Bonderizing Line #2 (EU31)**

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Company Name: NTN Driveshaft, Inc.

Address: 8251 South International Drive, Columbus, Indiana 47201

SPR to MSOP: 005-18032

Plt ID: 005-00066

Reviewer: ERG/SD

Date: October 17, 2003

Potential To Emit PM/PM10

Chemical	Maximum Throughput Rate (lb Steel/hour)	Pound of Chemical/Part	Pound of Steel/Part	% Solution	Estimated Evaporation Rate	Uncontrolled PTE of PM/PM10 (lb/hour)	Uncontrolled PTE of PM/PM10 (tons/year)	Control Efficiency	Controlled PTE of PM/PM10 (tons/year)
Formcoat 1A	11340	0.0067	8.50	--	5.0%	0.44	1.95	95%	0.10
Formcoat 1B	11340	0.0030	8.50	--	5.0%	0.20	0.89	95%	0.04
Freiclean 10M	11340	0.0037	8.50	--	5.0%	0.25	1.08	95%	0.05
Sulfuric Acid (10%)	11340	0.019	8.50	10%	5.0%	0.12	0.54	95%	0.03
Total						1.02	4.46		0.22

Assume all PM emissions are equal to PM10.

Five (5) % estimated evaporation rate is based on previous NTN Driveshaft air permits

Sulfuric Acid concentration is equal to ten (10) % in solution

Control = Acid Scrubber

METHODOLOGY

Uncontrolled PTE of PM/PM10 (lb/hour) = Maximum Throughput Rate (lb steel/hour) * Pound of chemical/part * 1/ (Pound of steel/part) * Estimated evaporation rate (%)

Uncontrolled PTE of PM/PM10 (tons/year) = Maximum Throughput Rate (lb steel/hour) * Pound of chemical/part * 1/ (Pound of steel/part) * Estimated evaporation rate (%) * 8760 hours/year * 1 ton/2000 lbs

Controlled PTE of PM/PM10 (tons/year) = Uncontrolled PTE of PM/PM10 (tons/year) * (1- Control Efficiency %)

Potential To Emit VOC

Chemical	Maximum Throughput Rate (lb Steel/hr)	Pound of Chemical/Part	Pound of Steel/Part	% VOC	PTE of VOC (tons/year)
Formcoat 1A	11340	0.0067	8.50	1.0%	0.39
Formcoat 1B	11340	0.0030	8.50	1.0%	0.18
Freiclean 10M	11340	0.0037	8.50	1.0%	0.22
Total					0.78

METHODOLOGY

PTE of VOC (tons/year) = Maximum Throughput Rate (lb steel/hour) * Pound of chemical/part * 1/ (Pound of steel/part) * VOC Content (%) * 8760 hours/year * 1 ton/2000 lbs

Appendix A: Emissions Calculations Degreasers

Company Name: NTN Driveshaft, Inc.

Address: 8251 South International Drive, Columbus, Indiana 47201

SPR to MSOP: 005-18032

Plt ID: 005-00066

Reviewer: ERG/SD

Date: October 17, 2003

1999 year Data

2,239 Total solvent purchased (gal)

2,136 Total waste solvent removed (gal)

103 Total solvent used (gal)

6.80 Pounds VOC per gallon

Potential to Emit VOC

Unit ID	Emission Unit (Degreasers)	Max. Rated Capacity (gal)	Capacity Ratio to Total	Max. Solvent Usage (gal/year)	PTE of VOC (tons/year)
EU43	Heat Treat South (DG#12)	9.0	5.73%	5.93	0.02
EU44	Heat Treat North (DG#13)	9.0	5.73%	5.93	0.02
EU45	Prop Shaft (DG#14)	9.0	5.73%	5.93	0.02
EU46	Maintenance (DG#15)	26.0	16.6%	17.1	0.06
EU47	Turnings North (DG#16)	26.0	16.6%	17.1	0.06
EU48	Assembly (DG#17)	26.0	16.6%	17.1	0.06
EU49	Turnings South (DG#18)	26.0	16.6%	17.1	0.06
EU50	Maintenance (DG#19)	26.0	16.6%	17.1	0.06
Total		157	100%	103	0.35

METHODOLOGY

Capacity Ratio to Total (%) = Max. Rated Capacity (gal) * 1/Total Max. Rated Capacity (gal)

Max. Solvent Usage (gal/year) = Max. Rated Capacity (gal) * Capacity Ratio to Total Gallons Used (%)

PTE of VOC (tons/year) = Max. Solvent Usage (gal/year) * Pounds VOC per Gallon * 1 ton/2000 lbs

Appendix A: Emissions Calculations Shot Blasting

Company Name: NTN Driveshaft, Inc.

Address: 8251 South International Drive, Columbus, Indiana 47201

SPR to MSOP: 005-18032

Pit ID: 005-00066

Reviewer: ERG/SD

Date: October 17, 2003

Potential To Emit PM/PM10

Unit ID/Emission Unit		Grain Loading (gr/dscf)	Air Flow (dscf/min)	Control Efficiency (%)	PTE of PM/PM10 After Integral Baghouses (tons/year)
EU51	CVJ #3 Shot Blaster	0.02	1,200	99%	0.90
EU52	CVJ #4 Shot Blaster	0.02	1200	99%	0.90
EU53	CVJ #5 Shot Blaster	0.02	1200	99%	0.90
Total					2.70

Assume all PM emissions are equal to PM10.

Control = Baghouse, which is considered as integral to the process

METHODOLOGY

PTE of PM/PM10 After Integral Baghouse (ton/year) = Grain Loading (gr/dscf) * Air Flow (dscf/min) * 60 minutes/hour * 1lb/ 7000 grains * 8760 hour/year * 1 ton/ 2000 lbs

Potential To Emit of HAPs

Unit/Emission Unit		Manganese Content (%)	PTE of Manganese (tons/year)	Phosphorous Content (%)	PTE of Phosphorous (tons/year)	Nickel Content (%)	PTE of Nickel (tons/year)	Chromium Content (%)	PTE of Chromium (tons/year)
EU51	CVJ #3 Shot Blaster	2.0%	0.018	0.035%	3.15E-04	3.75%	0.034	2.50%	0.023
EU52	CVJ #4 Shot Blaster	2.0%	0.018	0.035%	3.15E-04	3.75%	0.034	2.50%	0.023
EU53	CVJ #5 Shot Blaster	2.0%	0.018	0.035%	3.15E-04	3.75%	0.034	2.50%	0.023
Total			0.054		9.46E-04		0.10		0.07

METHODOLOGY

PTE of HAPs (ton/year) = Grain Loading (gr/dscf) * Air Flow (dscf/min) * 60 minute/hour * 1lb/ 7000 grains * 8760 hours/year * 1 ton/ 2000 lbs * HAP Content (%)

Appendix A: Emissions Calculations
Rust Preventative Coating Lines (1 through 5)

Company Name: NTN Driveshaft, Inc.

Address: 8251 South International Drive, Columbus, Indiana 47201

SPR to MSOP: 005-18032

Plt ID: 005-00066

Reviewer: ERG/SD

Date: October 17, 2003

Unit ID	Material	Max. Usage (lbs/year)	Weight % Hydrofluoric Acid	PTE of Hydrofluoric Acid (tons/year)
EU54 through EU58	Globrite 5006 ZP	681	1.00%	0.003
Total				0.003

METHODOLOGY

PTE of HAP (tons/year) = Max. Usage Rate (lbs/year) * Weight % HAP * 1 ton/2000 lbs

Unit ID	Material	Density (lb/gal)	Weight % Glycol Ether	Max. Usage Rate (lbs/year)	Pounds VOC per Gallon of Coating	PTE of VOC (tons/year)	PTE of VOC (lb/hour)	PTE of Glycol Ether (tons/year)
EU54 through EU58	Houghton RP 2417-161-01	8.35	0.30%	65080	1.20	4.68	1.07	0.10
Total						4.68		0.10

Actual Emissions (lbs/day) = 21.4

METHODOLOGY

PTE of VOC (tons/year) = Maximum Usage Rate (lbs/year) * Pounds of VOC per Gallon of Coating (lbs VOC/gal) * 1/Density (lb/gal) * 1 ton/2000 lbs

PTE of HAP (tons/year) = Max. Usage Rate (lbs/year) * Weight % HAP * 1 ton/2000 lbs

Actual Emissions (lbs/day) = PTE of VOC (lbs/hour) * Actual Hours of Operation per year (6000 hours/year) * Actual Days of Operation per year (300 days/year)

**Appendix A: Emissions Calculations
Summary**

Company Name: NTN Driveshaft, Inc.

Address: 8251 South International Drive, Columbus, Indiana 47201

SPR to MSOP: 005-18032

Plt ID: 005-00066

Reviewer: ERG/SD

Date: October 17, 2003

POTENTIAL TO EMIT OF CRITERIA POLLUTANTS IN TONS PER YEAR

Emission Units	PM	PM10	SO₂	NO_x	VOC	CO
Combustion Units	3.35	3.35	0.26	44.1	2.43	37.1
Boiler	0.14	0.14	0.01	1.84	0.10	1.55
CVJ Forging Press #3	15.7	15.7			20.1	
CVJ Forging Press #4	15.7	15.7			20.1	
CVJ Forging Press #5	15.7	15.7			20.1	
Induction Heating	4.27	4.27			0.06	
Bonderizing	4.46	4.46			0.78	
Degreasers					0.35	
Shot Blasting	2.70	2.70				
RP Lines					4.68	
Total	62.0	62.0	0.28	46.0	68.8	38.6